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DEPARTMENT OF TERRESTRIAL MAGNETISM

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(Retired June 30, 1946)

Description of the Earth's Main Magnetic Field and its Secular Change, 1905-1945

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PREFACE

The present volume summarizes a descriptive study of the Earth's main field and its secular change. It is the result of a very considerable outlay of persistent effort, with much attention to detail, on the part of those who have tried to fit the many published observations of magnetic surveys into a consistent picture.

Perhaps students of geophysics will welcome most the comprehensive new world-charts descriptive of secular change. These have been drawn complete in all magnetic elements for the first time. They are also, we believe, the first set of isoporic charts reasonably consistent with all available carefully assessed measurements with each other and with the known character of electromagnetic fields. Since they are drawn at four epochs a decade apart, the phenomenon is apparent with good continuity for almost half a century. A new and rich store of information is thus afforded respecting deep-seated, rapid, and mysterious physical processes of the Earth's interior which to the best of our present knowledge are not reflected in any other way.

The new charts of secular change have permitted the use of the great majority of survey-measurements made since the beginning of the present century in constructing isomagnetic charts in seven elements for the epoch 1945.0. The rather successful use of older as well as more recent data has thereby increased by a thousand or more the number of observational points that would ordinarily determine the isomagnetic lines. In this way, a somewhat more detailed description of the Earth's main field is afforded, bringing into a little sharper focus a major geophysical phenomenon of unknown cause.

It is not implied that this new series of charts represents an accurate description of the geomagnetic field. There are many regions in which magnetic measurements have never been made. Much use was made of uncertain interpolations, particularly across polar and ocean areas.

We have not troubled the reader with the multitudinous details incidental to a project of this kind. To have done so would have extended the present book to many volumes. The aim rather has been that of providing a condensed readable account highlighting features of importance and interest.

The writers wish particularly to record their great indebtedness to Dr. J. A. Fleming, retired Director of the Department of Terrestrial Magnetism, for his interest, kindly criticism, and assistance in carrying out the investigation and project. It is to be particularly noted that it was largely under his supervision and personal planning that the world surveys on land and sea that furnished such a large part of the data required in this work were carried out. We also wish to acknowledge our indebtedness to numerous magnetic observers and to our many co-workers in other organizations, notably the United States Coast and Geodetic Survey, the United States Hydrographic Office, and the United States Navy Department. It is also a pleasure to thank our many colleagues who worked with us and whom we represent as authors of this volume. Among these we wish to record our especial indebtedness to E. Balsam, N. Davids, W. N. Dove, H. D. Harradon, D. T. Heck, H. F. Johnston, R. Mason, H. M. Myers, A. M. Palmer, W. E. Scott, J. W. Smith, M. B. Smith (administrative matters), J. H. Taylor, and O. W. Torreson (publication). J. W. Blythe of the United States Hydrographic Office also rendered us valuable assistance in providing suitable base maps and in other ways.

Finally, grateful acknowledgment is made to the Naval Ordnance Laboratory, United States Navy Department, for the financial assistance which made this work and the present report possible, and to its able technical representative, Dr. G. H. Shortley, now of Ohio State University. Most of this work was carried out during the war period under Contract NOrd-392.

E. H. Vestine,
Department of Terrestrial Magnetism

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DESCRIPTION OF THE EARTH'S MAIN MAGNETIC FIELD AND ITS SECULAR CHANGE, 1905-1945

CHAPTER I

INTRODUCTION

1. Scope and summary.--The present publication is a summary, mainly in the form of maps, of the results of land and ocean magnetic observations made since 1905. It is a continuation of the series of volumes of "Researches of the Department of Terrestrial Magnetism"[1] only in the sense that the greater part of the observational material was obtained by the Department.

The world-wide distribution of magnetic observatories, land-survey stations (including repeat stations where magnetic observations have been made more than once), and ocean stations is indicated on charts. Tables are presented and their use for the removal of the influences of various geomagnetic fluctuations upon the values measured at the different stations is described. The procedure for deriving from measured elements (usually D, H, and I) the elements X, Y, Z, and F is discussed. For about 2,000 repeat stations and 100 observatories, graphs have been drawn of the measured and derived elements, corrected for geomagnetic fluctuations, as a function of time since 1905; about 100 graphs for each of seven elements are reproduced in this volume.

With the graphs as a basis, isoporic charts were prepared through the following operations. Values of the slopes of the graphs were scaled at the four epochs, 1912.5, 1922.5, 1932.5, and 1942.5, to give secular-change estimates. These results were plotted on large-scale maps of the world, and isoporic charts were prepared for H and D (and simultaneously for X and Y) which were adjusted to mutual consistency so that the vertical component of curl of the field and the line-integrals of the north and east components of intensity of secular change vanished to a good degree of approximation. Spherical harmonic analyses of the X- and Y-components of secular change were made with fair success by means of automatic machines. The values of the vertical components of secular change at each epoch were computed; the syntheses of values using coefficients found for the Z-component, on the assumption that no part of the secular-change field is of external origin, proved helpful in preparing the world isoporic charts of vertical intensity, especially in the polar regions. They also ensured good consistency between the charts for vertical intensity of secular change and those for the horizontal component. Corresponding isoporic charts in I and F were also constructed.

The adjustments for consistency were largest over ocean areas and in the polar regions; over land areas there resulted only slightly different general line-configurations, which tended to improve the agreement between the charts and the actual observations. The positions of the more outstanding singularities in the field of secular change were also derived and indicated. The isoporic charts for all epochs are reproduced in this volume.

The isoporic values obtained were next used to reduce all available magnetic observations made in any year since 1905 to the epoch 1945.0 through adding to the measured values, usually corrected for geomagnetic fluctuations, the increments in fields indicated for each 10-year epoch required. The results in D, H, and Z for 1945.0 were entered upon large-scale sectional maps consisting of 15 partial Mercator projections, a north polar projection, and a south polar projection. The charts for H and D were tested for mutual consistency in a manner similar to that employed for the corresponding isoporic charts. A spherical harmonic synthesis was used to check the line-configurations of charts for the vertical component of the field with fairly good results, assuming the Earth's field to be entirely of internal origin.

Main-field charts in three sections each were also constructed in X, Y, I, and F for 1945.0, and, with the charts for D, H, and Z, are included here.

In preparation for a later volume in this series, the results of the spherical harmonic analysis have been employed to compute isomagnetic charts of the main field and isoporic charts for epoch 1945.0 for various heights within and beyond the Earth's atmosphere.

2. Magnetic surveys of the Department of Terrestrial Magnetism, Carnegie Institution of Washington, and of other organizations.--All observations included in volumes I to VI of the "Researches of the Department of Terrestrial Magnetism" have been used in this work, as well as the results from the latest volume of this series, as yet unpublished, covering the period 1927 to 1944. The surveys are adequately described in the volumes cited, which contain the published results of a major project of the Department, The magnetic and electric survey of the Earth. There have been utilized, accordingly, the results of some hundred Departmental or cooperative land-survey expeditions, the ocean results of cruises I, II, and III of the ship Galilee, and of cruises I to VII of the nonmagnetic ship Carnegie. Careful attention has been given to the inclusion of the available results of all other expeditions since 1900 as, for example, those of the Discovery and the Gauss, the Ziegler Expedition, various International Polar Year Expeditions of 1932-1933, Admiral Byrd's Antarctic Expeditions, and various Russian expeditions.

3. Instruments.--The instruments used on land in the surveys just mentioned consisted mainly of conventional magnetometers for measuring H and D, and dip circles (replaced by earth inductors in later decades) for determining the inclination, I. Such instruments have been described adequately in volumes I to VI of the "Researches"[1] which also include detailed descriptions of the new instruments developed for magnetic observations on board ship and full particulars regarding methods of observation and standards adopted. Particulars respecting the instruments of other organizations usually have been given in the various publications of results; earlier measurements in some instances were defective because of instrumental deficiencies, and the general standards of quality probably became higher in later decades.

4. Magnetic surveys required in the future.--It is well known that the distribution of observations over the Earth's surface is uneven. There are extensive ocean areas, such as those near the south polar regions, in which no magnetic measurements have ever been made. On land there is urgent need for additional surveys in the south polar regions, north polar regions, Africa, and eastern Asia. This urgency applies also to resurveys of all oceans, particularly of the Indian, North and South Pacific, and South Atlantic oceans. It is hoped that many of these present deficiencies, which will seriously affect future isomagnetic charts for navigation by sea and air, may be eliminated by the introduction of magnetic surveys by plane, now instrumentally feasible, supplemented by the work of ground-control land-survey stations, and by similar measurements at sea on nonmagnetic ships. It is accordingly encouraging to note the completion and commissioning of the British nonmagnetic ship Research and the plans of the Union of Soviet Socialist Republics for the construction of a nonmagnetic vessel along lines somewhat similar to those of the Carnegie. These surveys are of international concern and benefit and should be undertaken without undue delay.

CHAPTER II

PRELIMINARY DESCRIPTION OF THE EARTH'S SURFACE MAGNETIC FIELD

1. Distribution of stations.--The Earth's surface magnetic field varies with time. The description of this field at any instant is therefore difficult since to undertake measurement of it simultaneously at all points of the Earth's surface is not practical. A, B, and C of Figure 1 show the positions of some hundred magnetic observatories where continuous simultaneous measurements of the Earth's field are in progress, but the complexity of the field and its changes with time do not permit satisfactory interpolation of values in intervening regions. The density of observatories over the Earth's surface is uneven, and the great ocean areas are scarcely represented. There has therefore been established a network of several thousand temporary stations at which observations are made to supplement the results obtained at observatories. Measurements at these stations on land or sea usually extend over only a few hours at one time and constitute a magnetic survey. About two thousand of the stations are repeat stations at which magnetic observations have been made more than once. Sections A to Q of Figure 2 show the locations of repeat stations and of other survey stations on land and sea occupied for observations of declination.

In reducing magnetic observations to epoch, an attempt is made to determine at all stations the intensity and direction of the Earth's field, freed from the effects of small superposed fluctuations. More generally we seek to estimate from the magnetic measurements made at different times and in different locations the intensity of field also at all intermediate (or suitably extrapolated) times and locations.

The problem of describing the Earth's surface field is greatly simplified if only the main or permanent field is mapped. This includes only the largest slowly varying portion, which is mapped to a moderate degree of accuracy (one or two orders of magnitude less than that of the actual observations). This main field shows a gradual variation with the passing of the years known as the secular variation. The strength of the main field at any time is called its normal value at that time.

2. Influence of fluctuations in the Earth's field on estimates of normal values.--Although the rough and general description of the geomagnetic field in terms of its normal values (as shown on magnetic charts) is comparatively easy, the derivation of the normal values themselves is a complex and difficult task. To obtain these it is first necessary to remove from the individual magnetic observations the contributions of extraneous fluctuations which are not a part of the secular variation.

The extraneous fluctuations are often large enough to affect seriously the estimates of secular change obtained from two or more observations made in different years. These fluctuations may thus render difficult or impossible a reliable estimate of the normal values at epochs other than those of observation, since the secular change may not be determined accurately either with respect to magnitude or sign. When the observations have been corrected for fluctuations in field, so that improved estimates of secular change are available, the magnetic observations are then readily reduced to the desired epoch.

It is thus important to eliminate influences of extraneous fluctuations from magnetic field observations. In the first place, the observations are affected by a geomagnetic variation with sunspot-cycle, denoted by RV, mainly due to the effect of magnetic storms in lowering the average value of H. The greater the number of storms each year (greatest near sunspot maximum), the greater the effect. Its amplitude is about 40 gammas in low and middle latitudes and its period about 11 years.

A further effect on the estimation of the secular change is exerted by the annual variation AV indicated by the monthly mean departures from the annual means in H; this variation results mainly from the seasonal variation in the number and intensity of storms or disturbances.

More marked than the variation AV is the post-perturbation P, defined here as the daily mean departure from the monthly mean in a component of the Earth's field. During magnetic disturbance, the daily mean of H is depressed, sometimes very considerably below the monthly mean value, whereas on undisturbed days, and especially following a sequence of such days, the daily mean in H may rise to a value considerably above the monthly mean. Although field observations are seldom made on days of magnetic storm, they may be made on all other days, and a correction for the effect of P is usually necessary and desirable.

In general, measurements of H on a given day at a field station may last from about one to two hours. The mean value of H during such an interval of measurement may be above or below the daily mean value of H. The correction here involves a reduction from mean of hour to mean of day and is achieved only with difficulty. If the field measurement extends over an entire day, the complete reduction to a normal value may be obtained with a considerable degree of precision from extrapolated or interpolated observatory values. It is therefore incumbent on those responsible for the organization of magnetic surveys to arrange that facilities shall be available for obtaining daily mean values at field stations whenever practicable, if estimates of secular change are desired at such stations.

Since there are few observations of the latter type, it is generally necessary to attempt to derive the difficult and uncertain correction from mean of hour to mean of day. The variations affecting the daily mean value comprise the solar daily variation S_q, present in its purest form on magnetically undisturbed or quiet days and varying with local time, and the disturbance daily variation S_D which is a principal part of magnetic disturbance. There is also an aperiodic variation called the storm-time variation D_{st}, varying with time measured from the onset of a magnetic disturbance, and irregular disturbances D_i of complicated character lasting sometimes only for minutes and sometimes for many hours and very difficult to estimate. Finally, there exists a lunar daily variation L of small and negligible amplitude (for our purposes) except in possibly one restricted equatorial region. These variations affecting the daily mean are all ultimately associated with the Sun and Moon, and probably more directly with electric currents caused by air motions and tidal actions within the Earth's atmosphere.

These variations have been the object of much research. Their average geographical distribution varies in general in a systematic and known manner with the position of a point on the Earth. They possess, however, a certain degree of variability and flexibility in form, amplitude, and time-phase from day to day. Thus it appears practical to obtain at best only a rough correction from mean of hour to mean of day. These corrections are useful under certain conditions which fortunately exist on the great majority of days. There are, however, days for which the tables and procedures, which will be given later, do not succeed in obtaining a useful correction to the mean of day of the geomagnetic field. Although some progress has been made in treating such days, there is need for further improvement in method on the part of future investigators.

It may, however, be remarked that the correction from mean of hour to mean of day can usually be obtained at a field station if this station is sufficiently close to a magnetic observatory. This method of correction is always preferable when carefully and judiciously used. It is applicable, however, only for stations a few hundred miles distant from an observatory. At greater distances, corrections by this method may be uncertain and dangerous because of the rapid change in form and amplitude of the variations found in certain geographical regions. Although the method is advantageous for the reduction from mean of hour to mean of day, it is not usually the best way to make the reduction from mean of day to the normal value. For this purpose it is preferable to make use of many observatories because of the world-wide and highly systematic character of the latter corrections.

Spherical harmonic analyses have shown that all except possibly a few per cent of the Earth's main field and its secular change is of internal terrestrial origin. The small external part may be attributed to electric currents probably flowing in conducting regions of the atmosphere or perhaps, in part, in the form of a current-ring in the equatorial plane at a distance of a few earth-radii. This possible fairly constant external part might conceivably undergo variations with those of the intensity of solar radiation, thereby changing in strength from time to time. Our new analyses, to be presented in a later volume, do not confirm these statements as facts. The remaining geomagnetic variations appear to be of external origin with corresponding internal parts induced by time-variations in external current-systems.

3. Sources of error in geomagnetic measurements.--The Earth's field is determined both in magnitude and direction by measurement of only three elements; these are usually the horizontal intensity H, the magnetic declination D (which gives the bearing, positive to the east or negative to the west, of H from true north), and the magnetic dip or inclination I, the angular departure of the total field vector F from the horizontal in the plane of H, positive when F is downwards and negative when upwards relative to the Earth's surface. Occasional measurements are also made of the components of F in the north (X), east (Y), and vertically downward direction (Z). If referred to geomagnetic north and east, the components X and Y are denoted X′ and Y′, respectively, the geomagnetic north pole in northern Greenland being located in north latitude $\phi = 78^\circ.5$ and east longitude $\lambda = 291^\circ.0$ as of epoch about 1922.

An exhaustive discussion of the sources of error in geomagnetic measurements is beyond the scope of the present project. Various treatments of the subject, differing in degree of completeness, are presented elsewhere. Attention is confined in this report to a few of the more common and important sources of error.

The accuracy of magnetic observations depends mainly on the type and character of equipment, plan and technique of operation, and skill and care of the observer. Thus it is found that because of improved instruments and techniques observations made a half century ago are usually excelled by those made in more recent years. An important illustration of this type of improvement is the introduction of the earth inductor for measuring magnetic dip, replacing the dip-circles of earlier generations and resulting in greater accuracy. Instruments may also tend to deteriorate and wear with use and consequently lose in accuracy. The plan and technique of instrumental operation and the number of measurements composing an observation vary with the data-gathering organization responsible. There is also a personal element which enters into the observations; and, although procedures of measurement are on the whole highly standardized, the results obtained by different observers show small differences even with the same equipment. Some of the principal sources of error appear to be (1) the presence of magnetic matter in the brass or copper parts of the instrument; (2) changes with time in the adopted standards applicable to instrumental parts, for example, in the moment of inertia of the magnet-system of a magnetometer measuring horizontal intensity by the method of oscillations; (3) changes with time in deflection-distances of magnet-supports in magnetometers due to small changes in shape of deflection bars; (4) wear in the bearings and brushes of earth inductors; (5) unspecified changes in instrumental constants not readily ascertained but detected by intercomparison with standard instruments carefully maintained, these changes occasionally occurring at an unknown time during field use; (6) faulty operation with respect to leveling and unavoidable influence of temperature-changes during magnetic measurements; (7) infrequent intercomparison of magnetic instruments with reliable standards; (8) faulty computations of results, at present more serious than they should be.

The defects in magnetic observations arising from faulty instrumental equipment are not readily removable from the data. Such observations can sometimes be weighted or, in case of doubt, discarded when there is reason to believe the defects are serious. However, errors of this kind are in most surveys of minor character and less important than the influences of extraneous fluctuations on data used in mapping the main field and its secular variation.

FIGURES 1 - 2

Figure Page

1(A). Locations magnetic observatories used, low to higher latitudes 6

1(B). Locations magnetic observatories used, north polar regions 7

1(C). Locations magnetic observatories used, south polar regions 7

2(A)-(Q). Locations magnetic observatories, survey-stations, and repeat stations used for declination 8

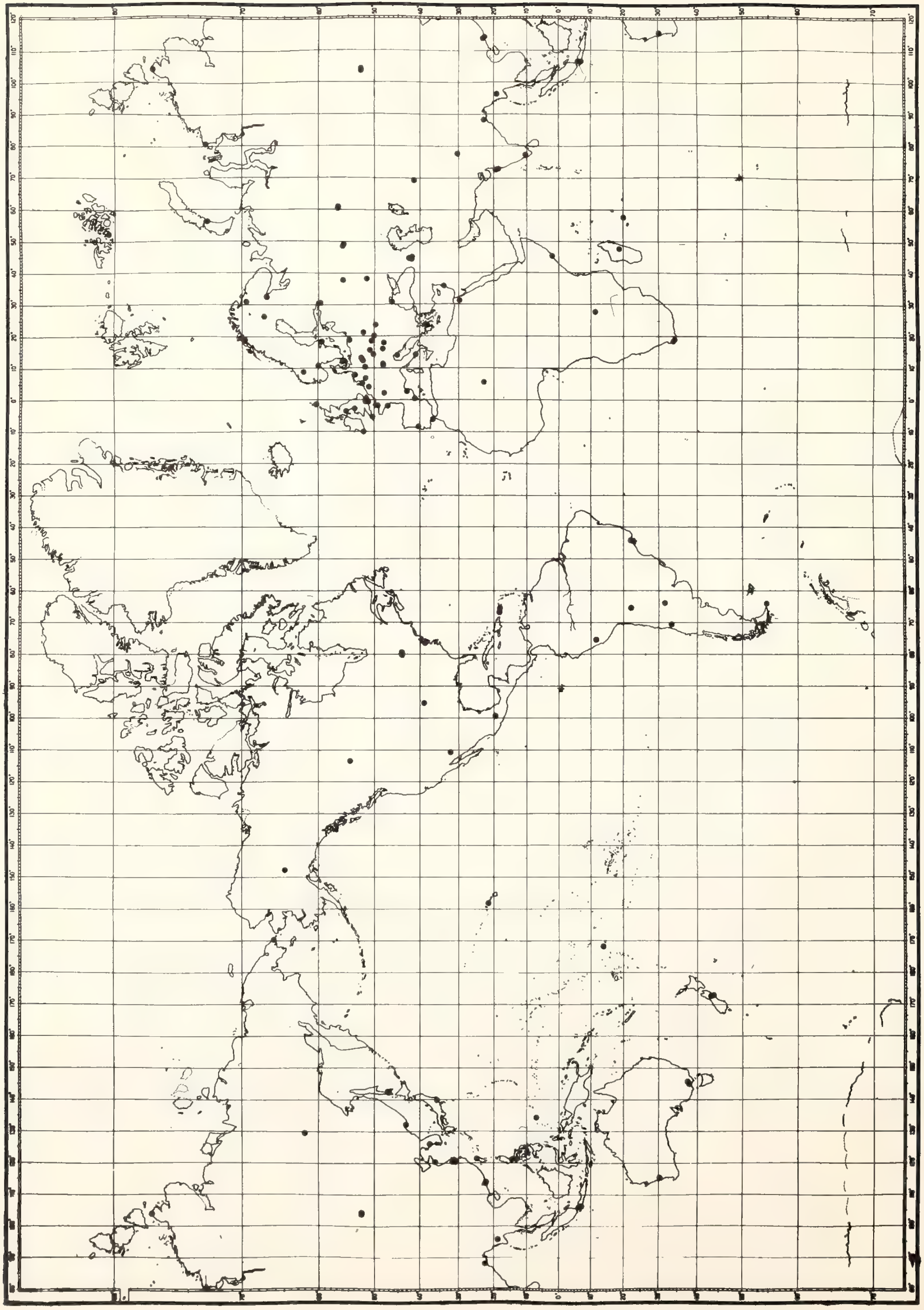

FIG. 1 (A)—LOCATIONS MAGNETIC OBSERVATORIES USED, LOW TO HIGHER LATITUDES

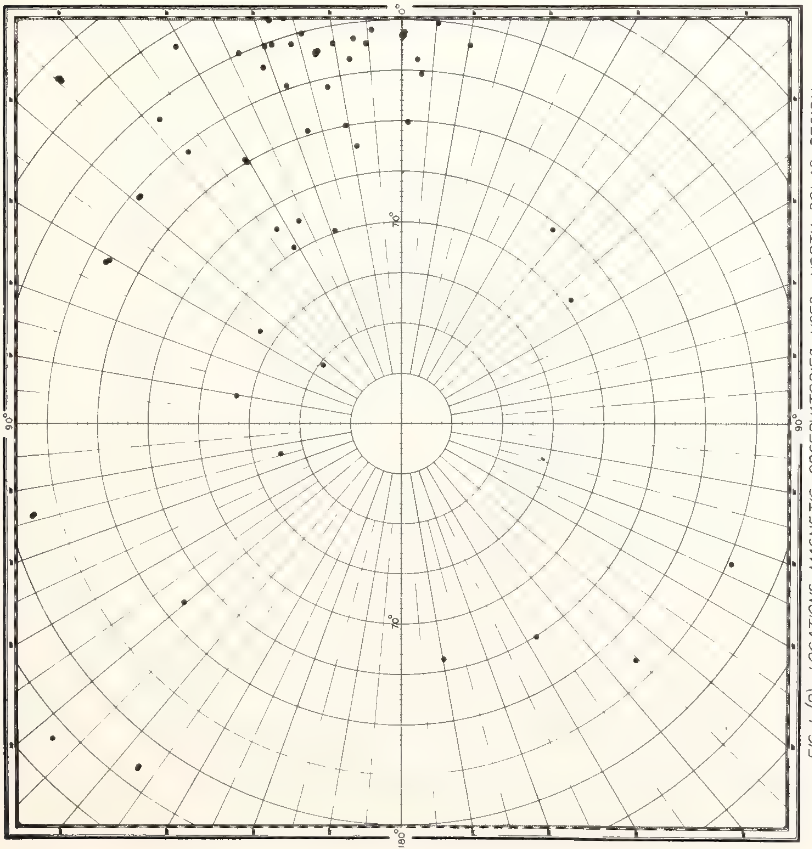

FIG. 1 (B)– LOCATIONS MAGNETIC OBSERVATORIES USED, NORTH POLAR REGION

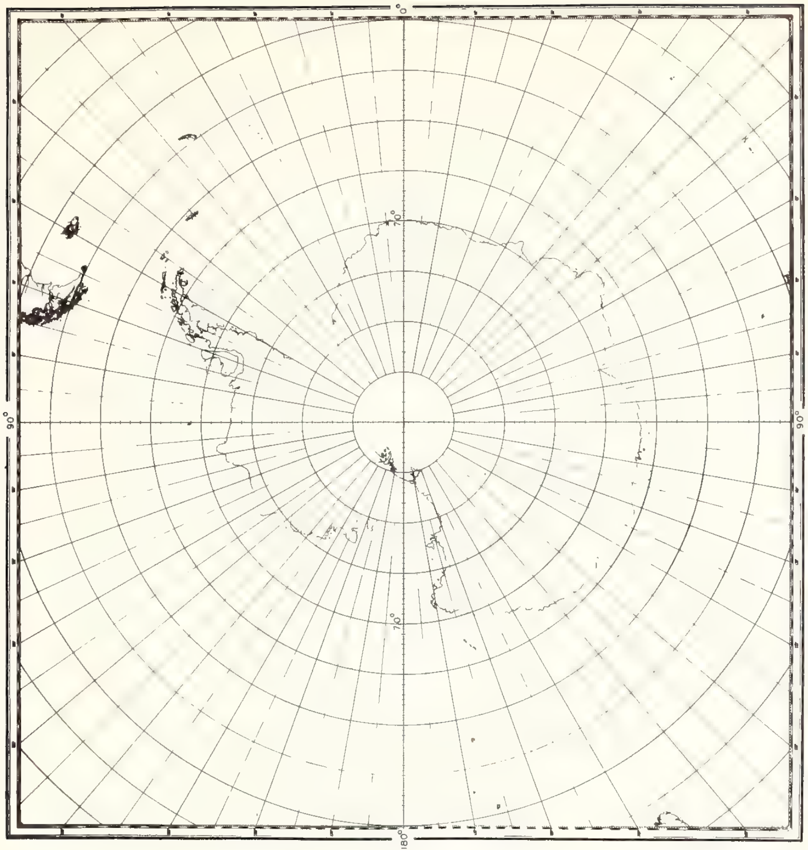

FIG. 1 (C)– LOCATIONS MAGNETIC OBSERVATORIES USED, SOUTH POLAR REGION

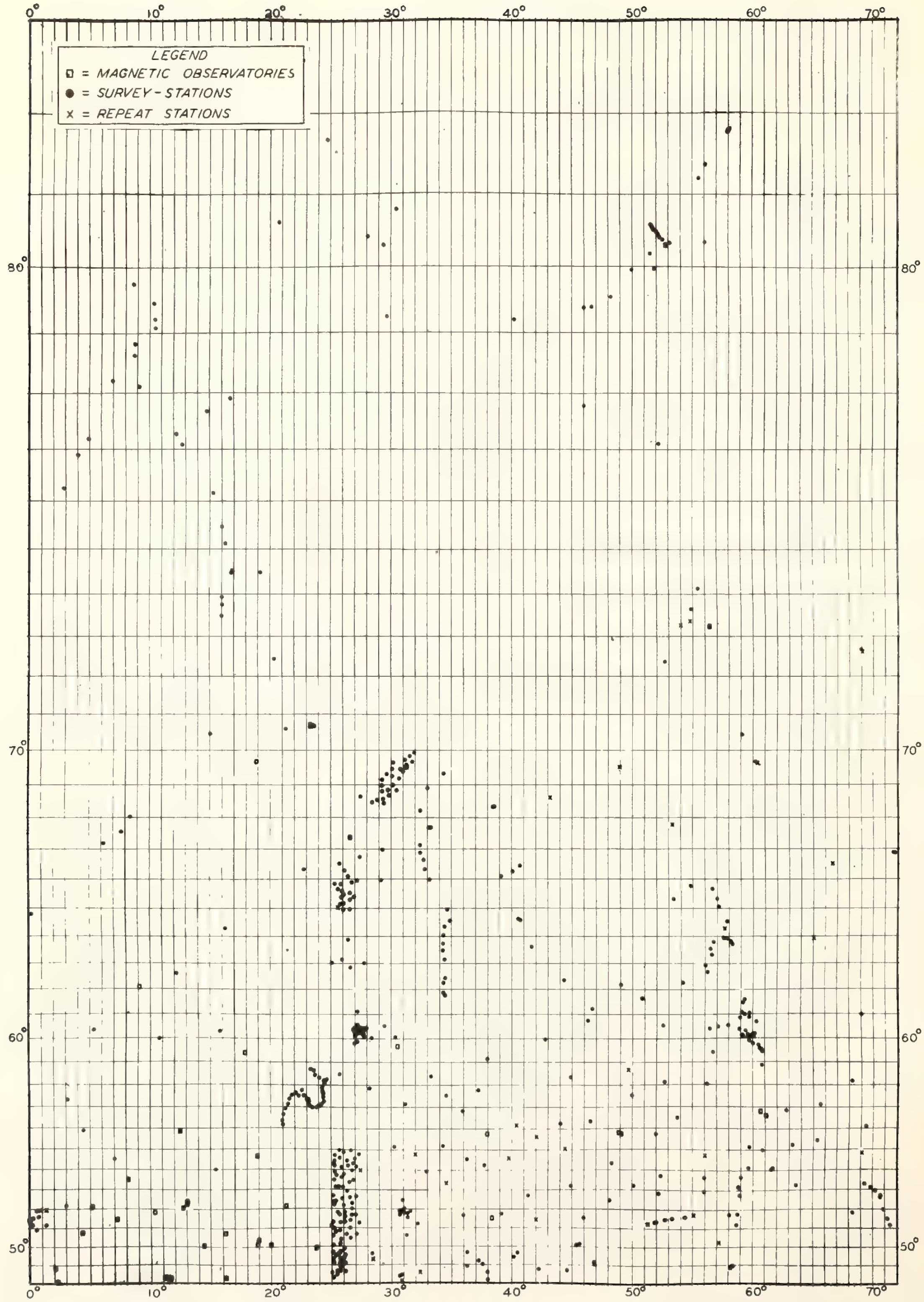

FIG. 2(A)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

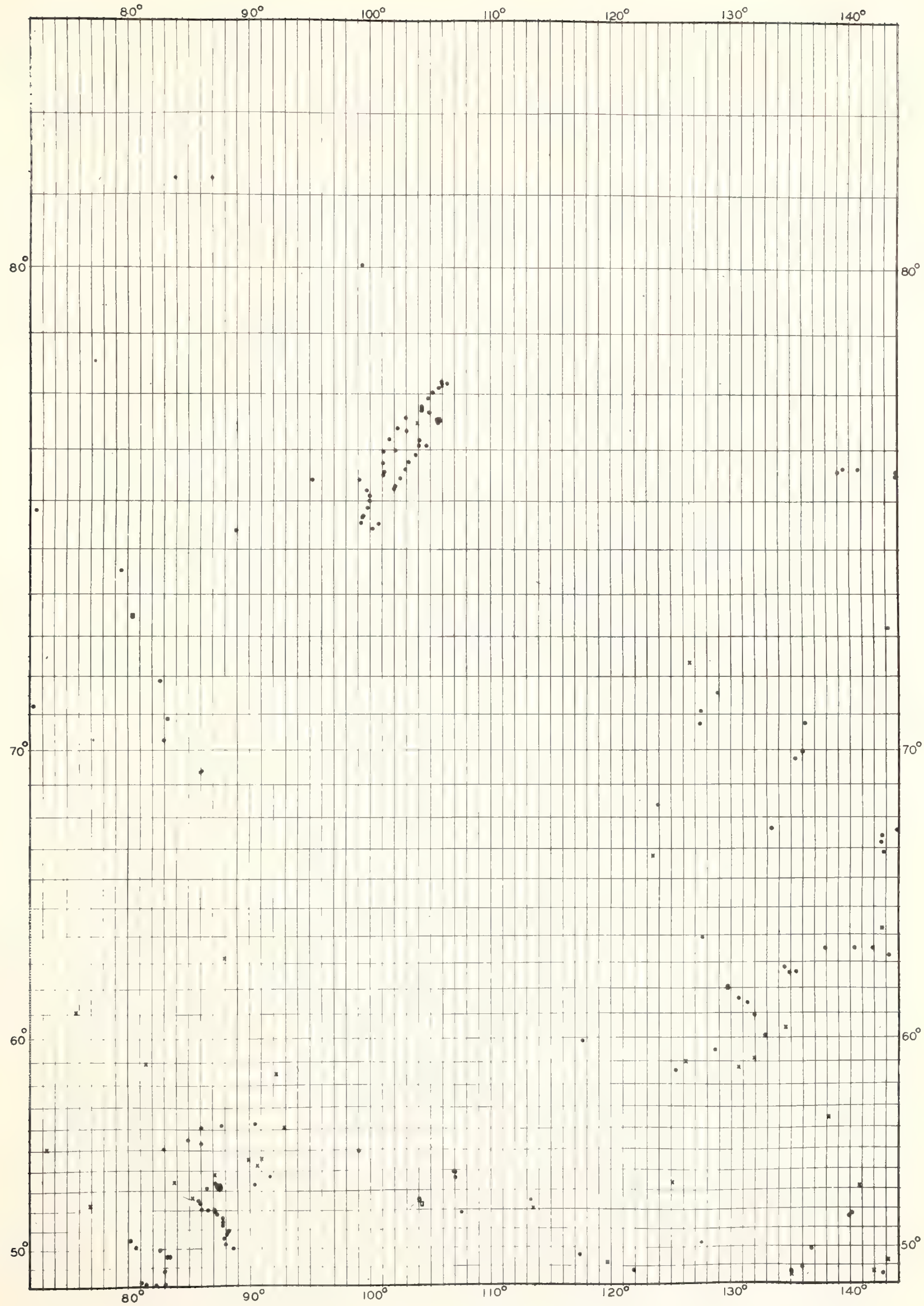

FIG. 2(B)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

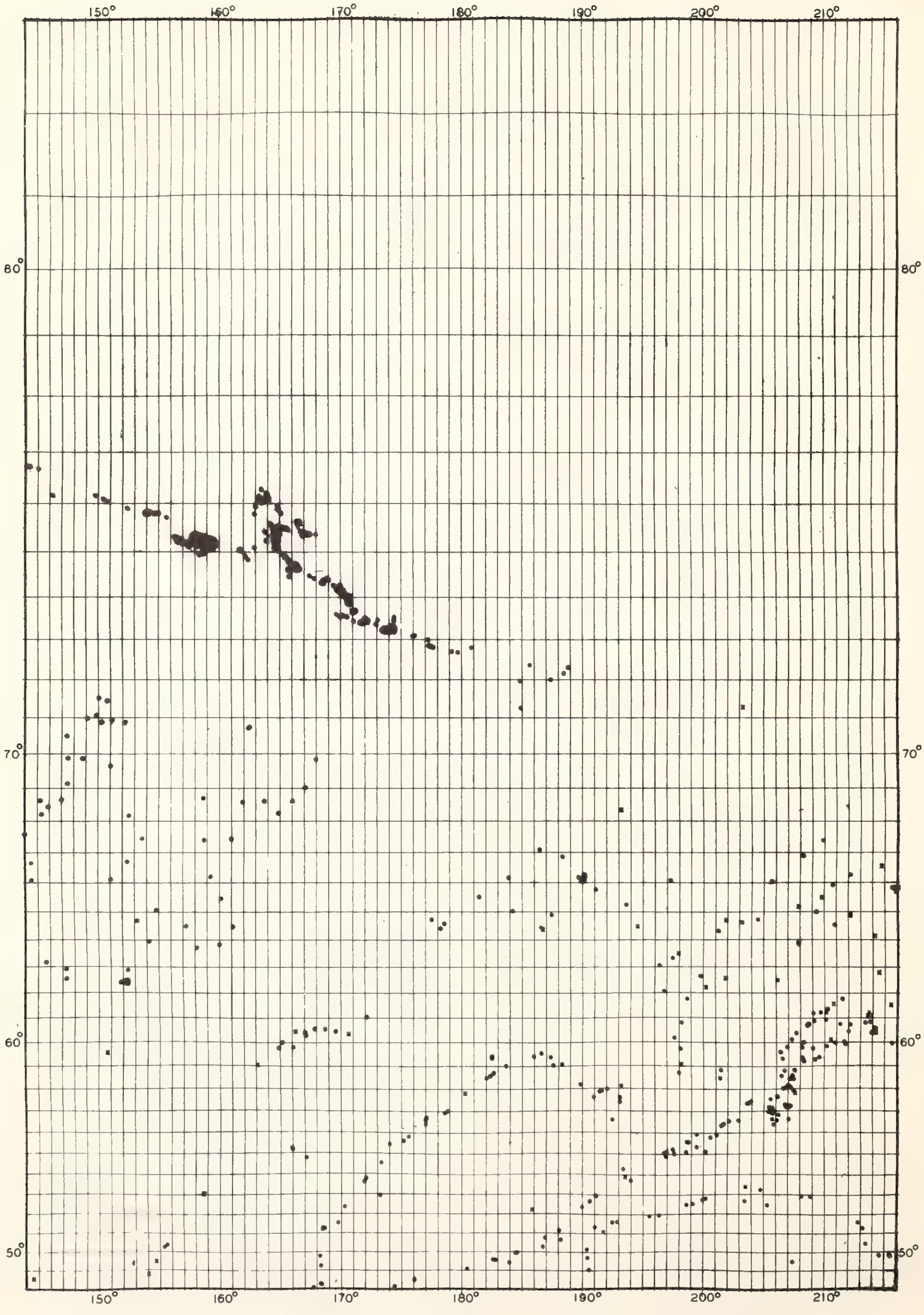

FIG. 2(C) — LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

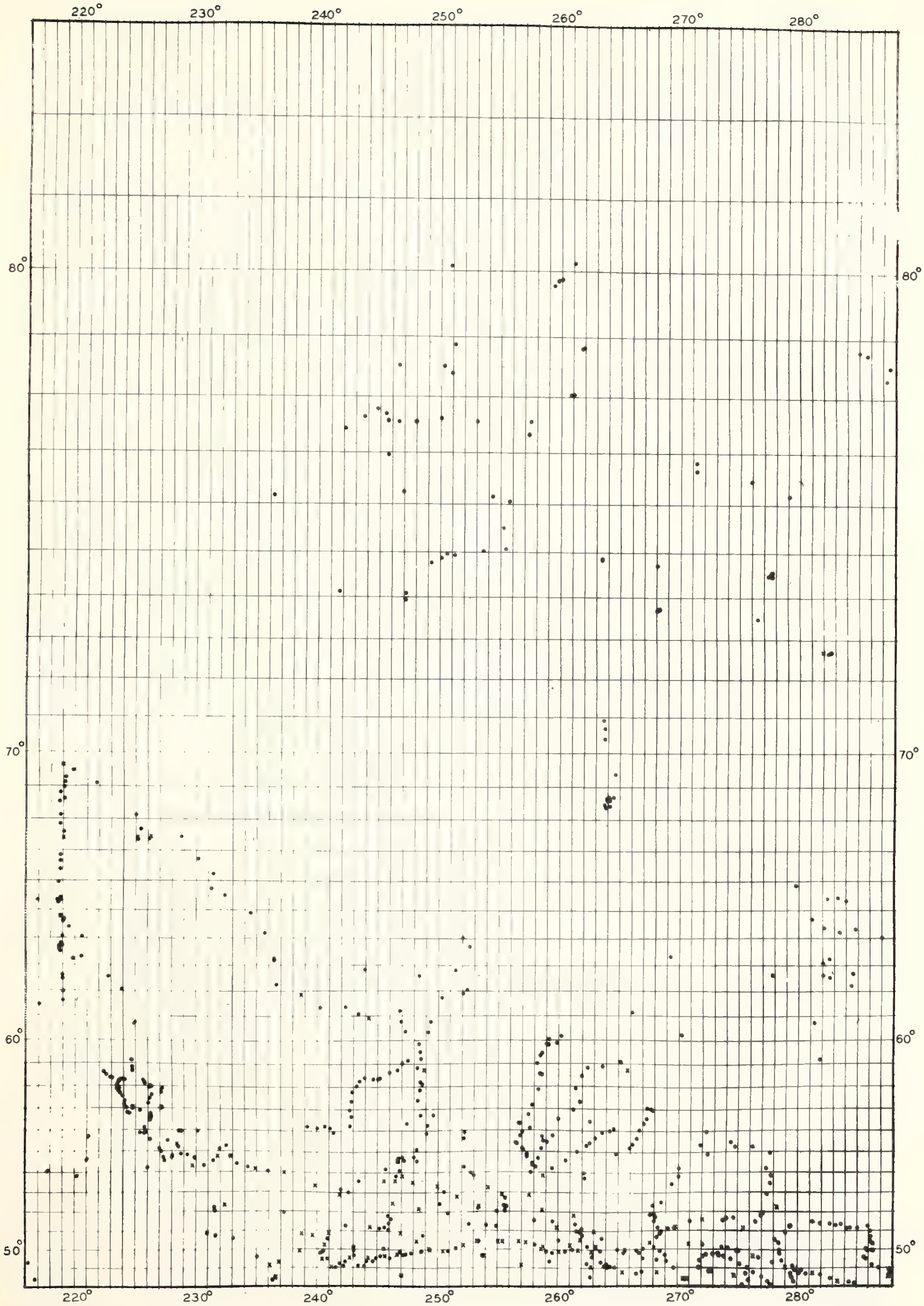

FIG. 2(D)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

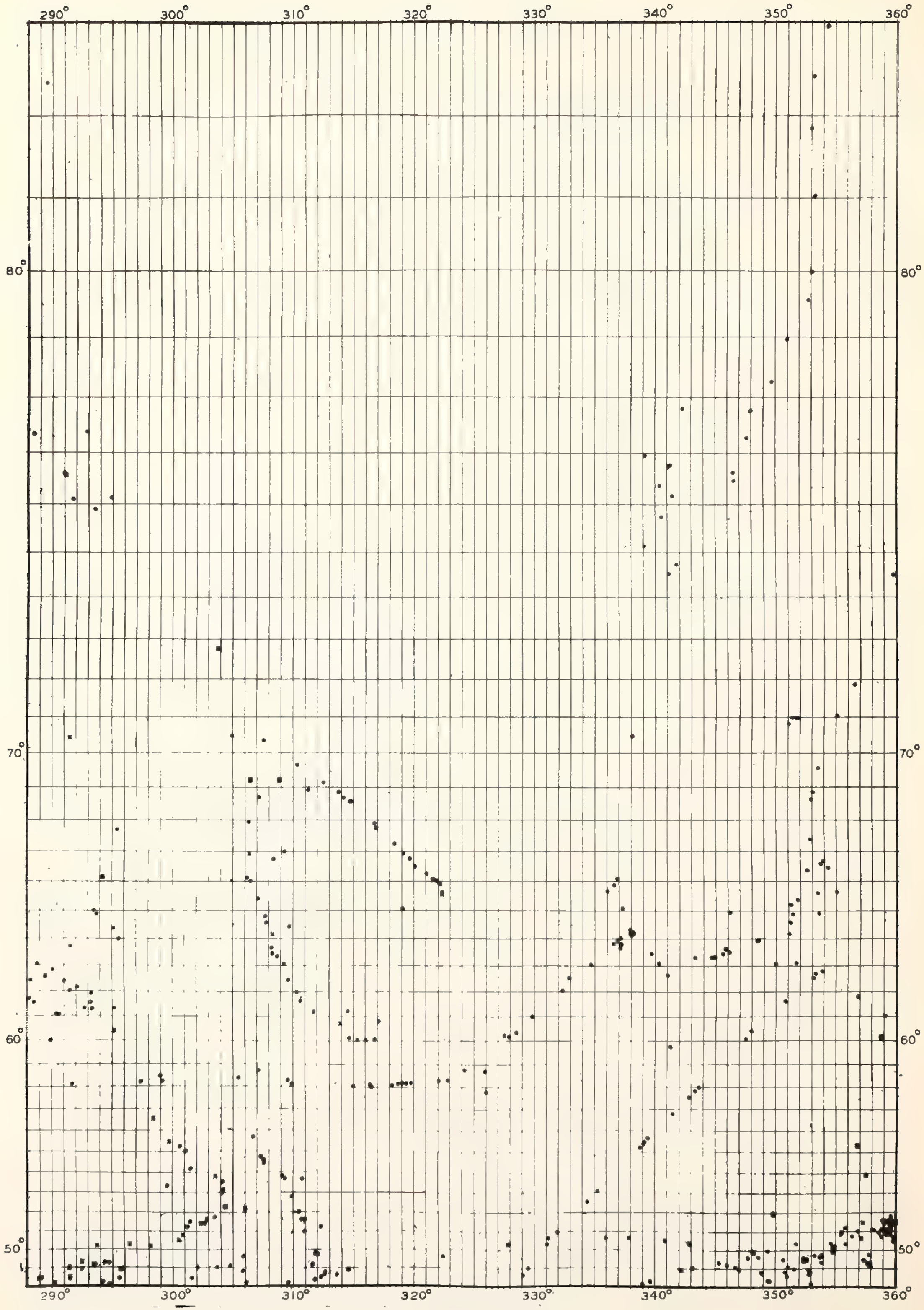

FIG. 2(E)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

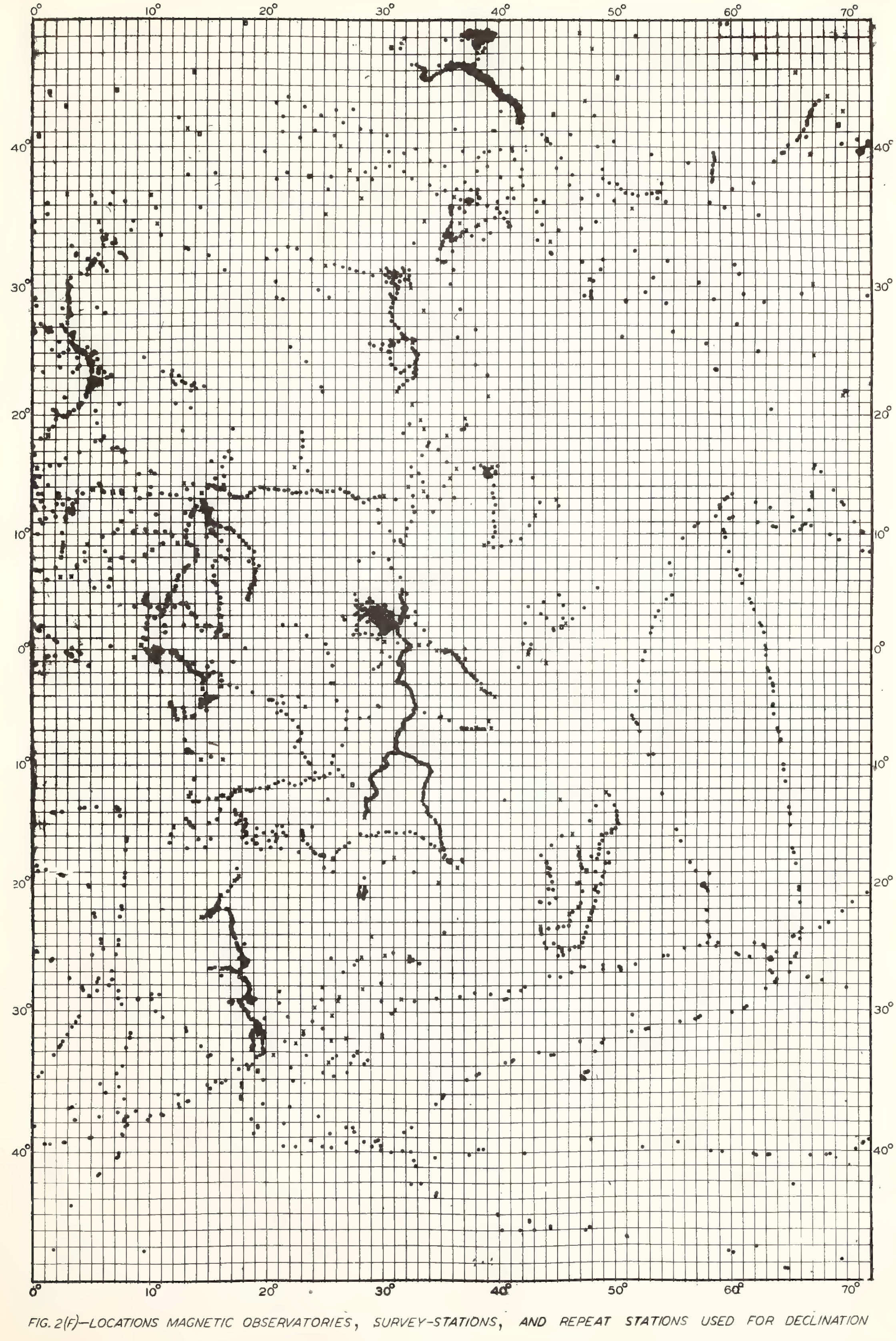

FIG. 2(F)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

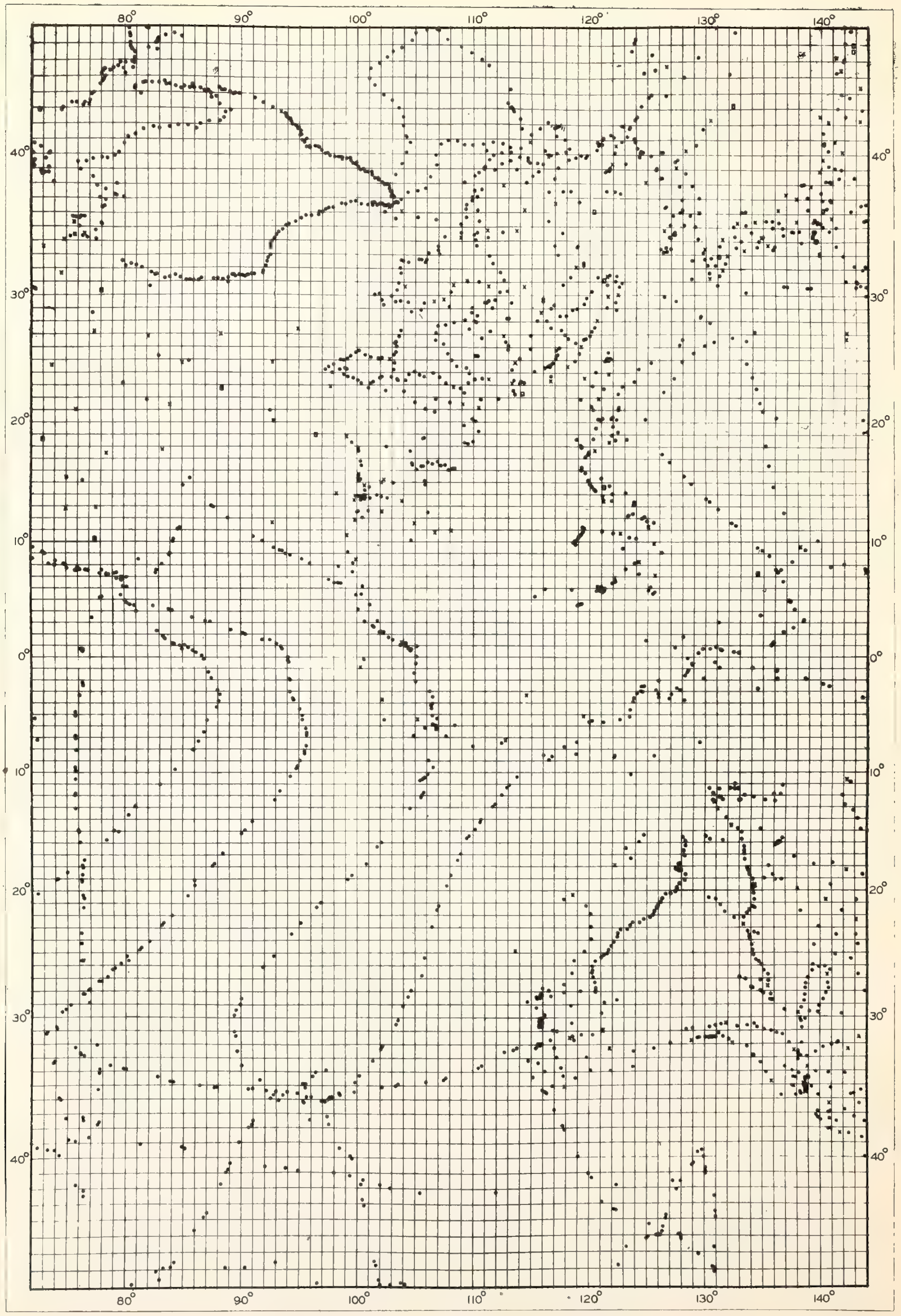

FIG. 2 (G) – LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

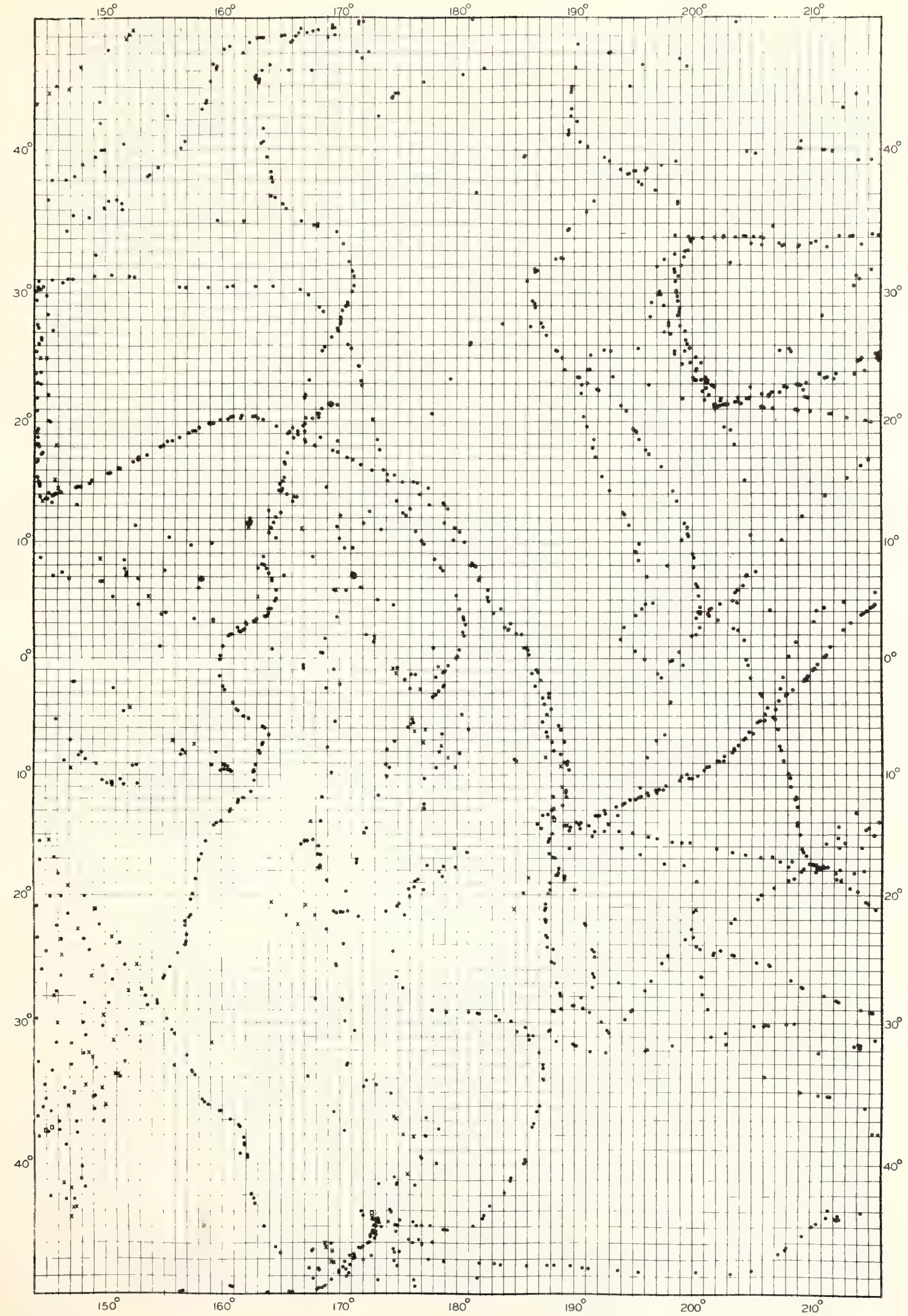

FIG. 2(H)-LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

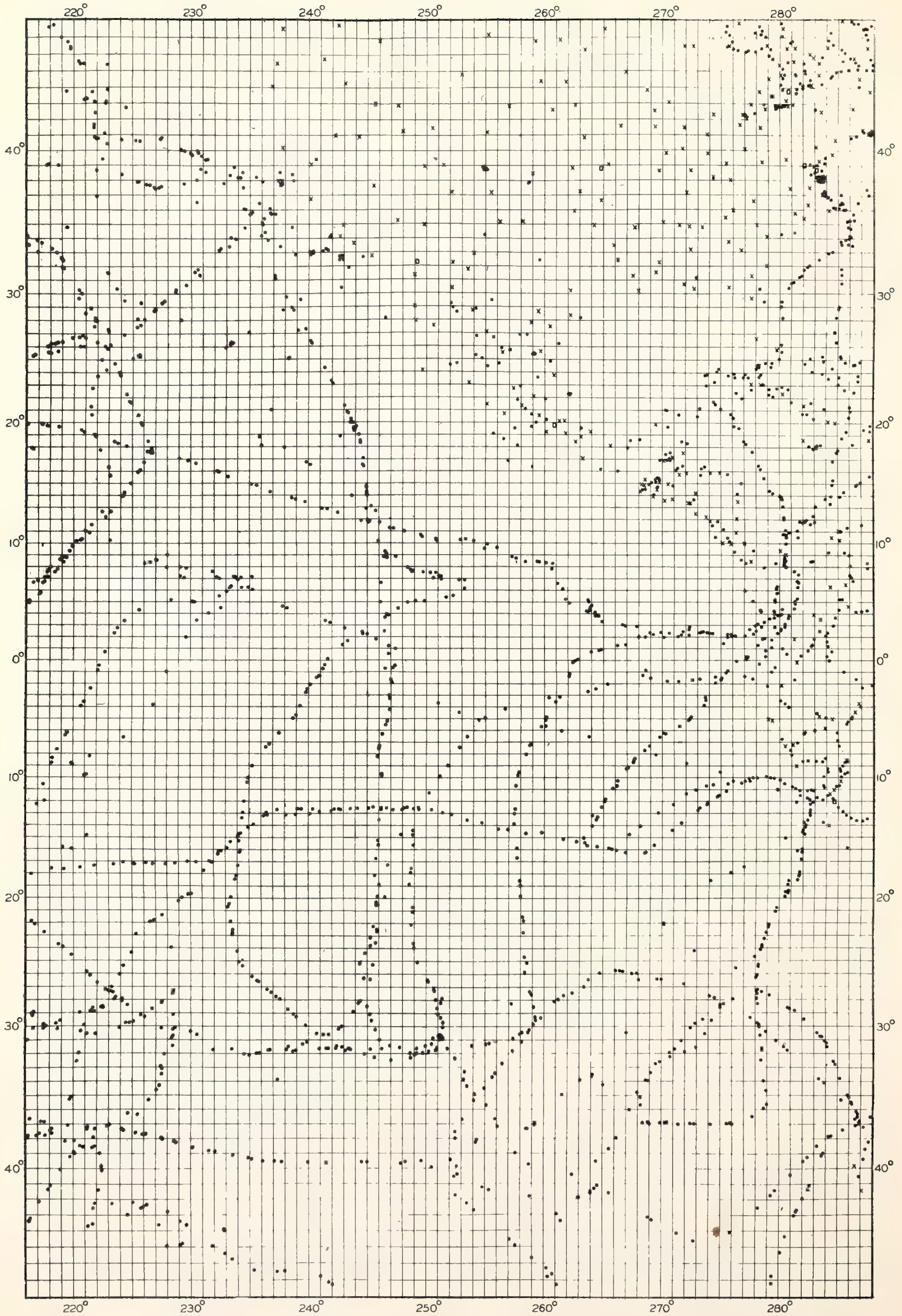

FIG. 2 (I)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

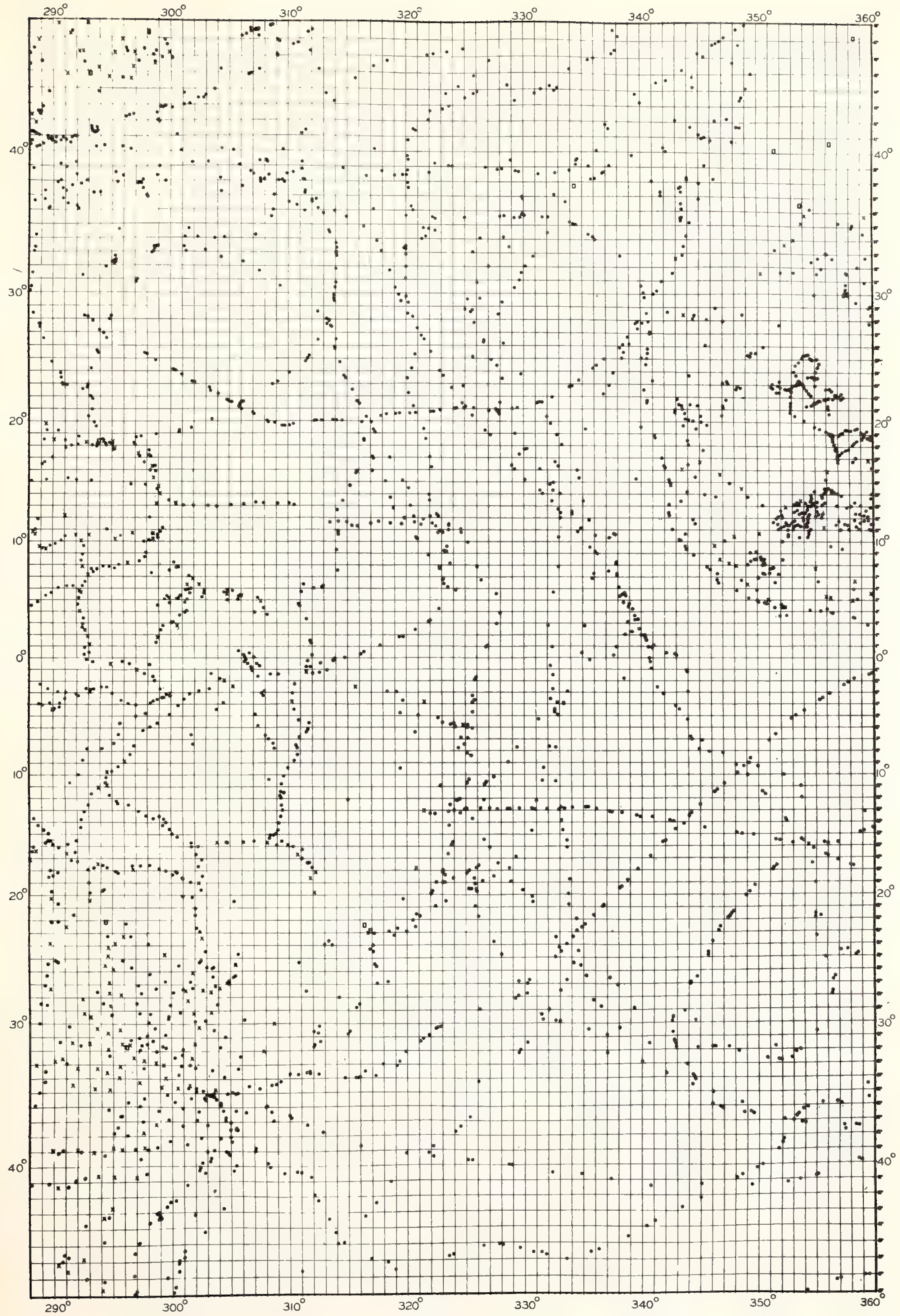

FIG. 2 (J)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

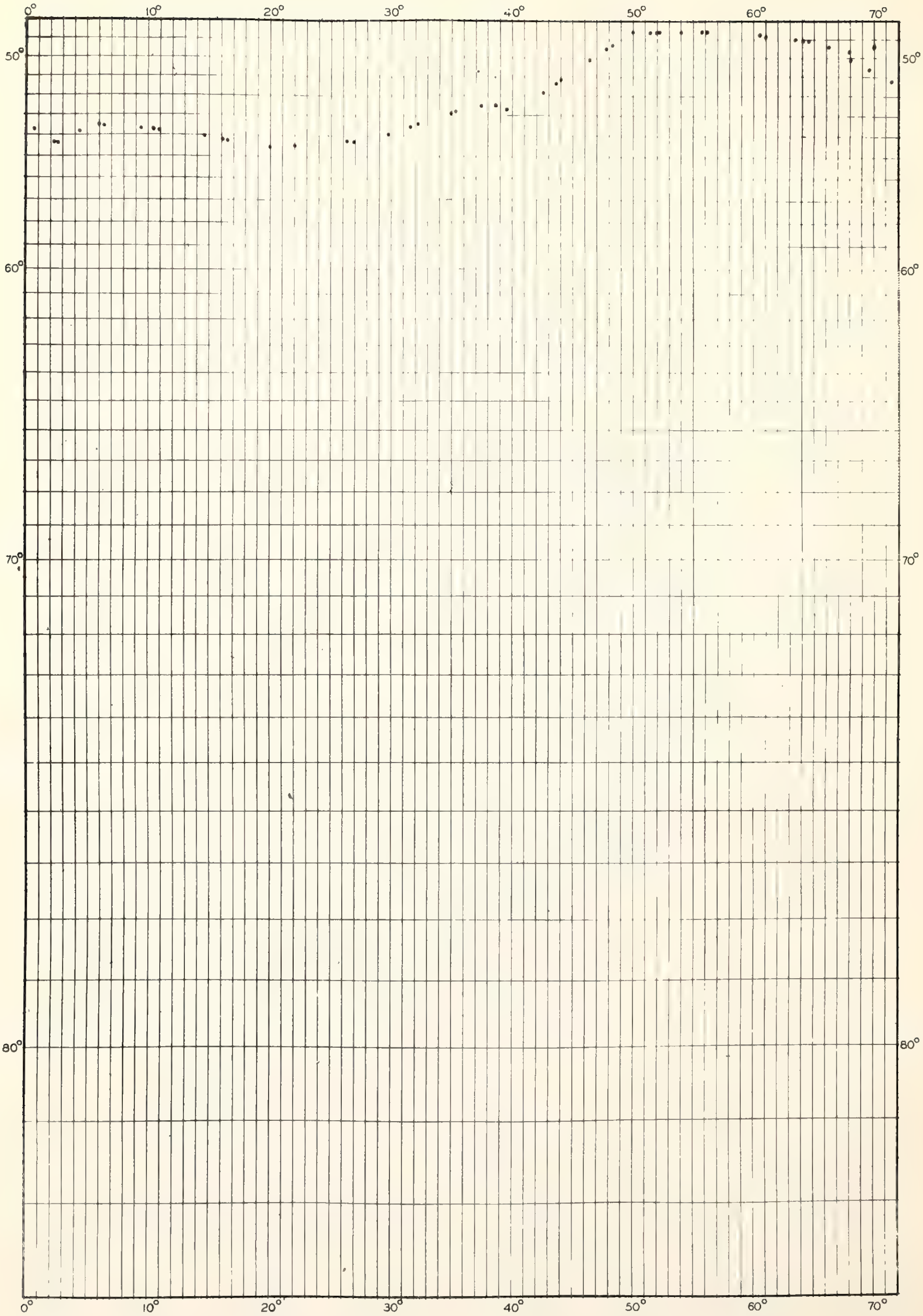

FIG. 2(K)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

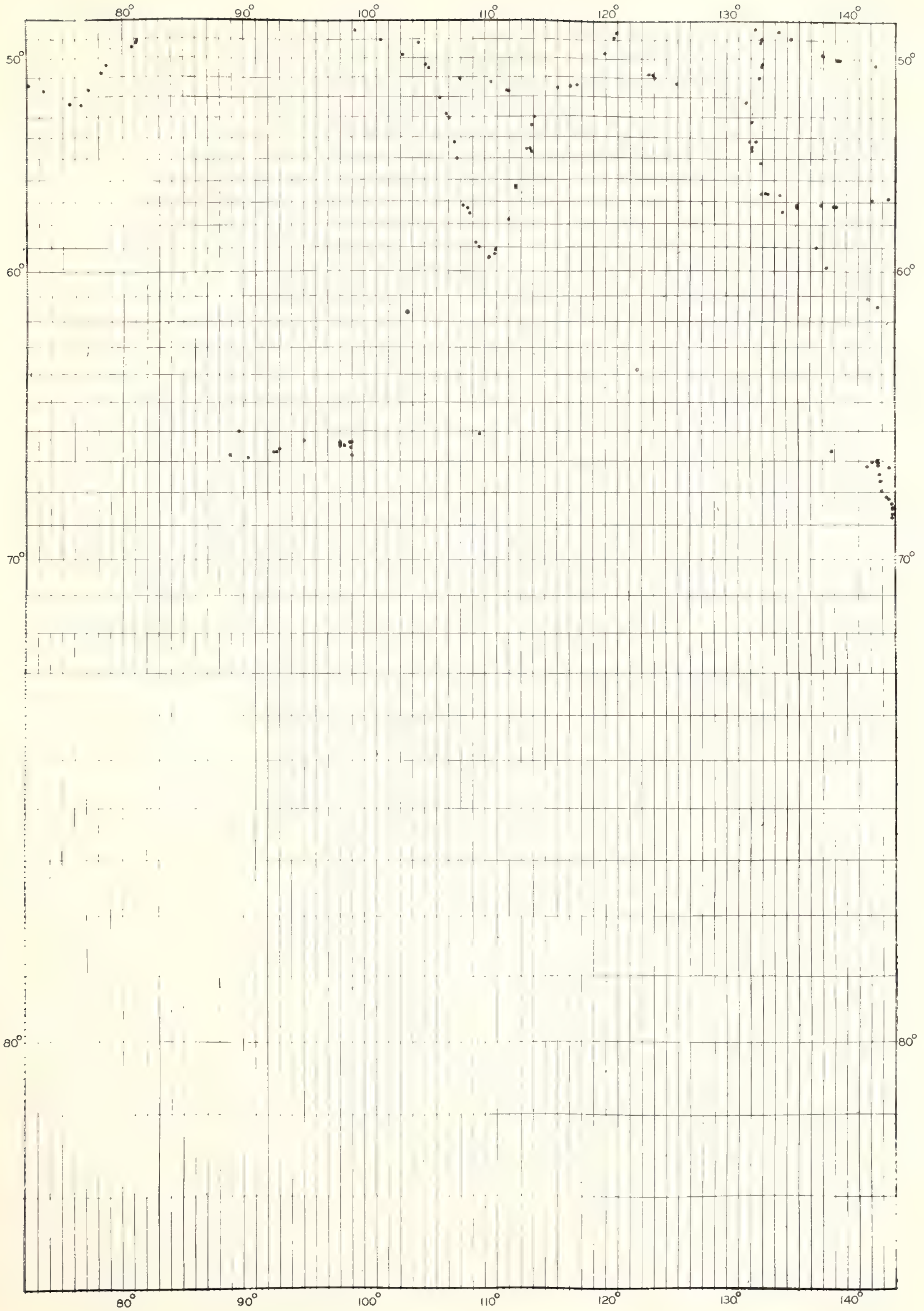

FIG. 2(L)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

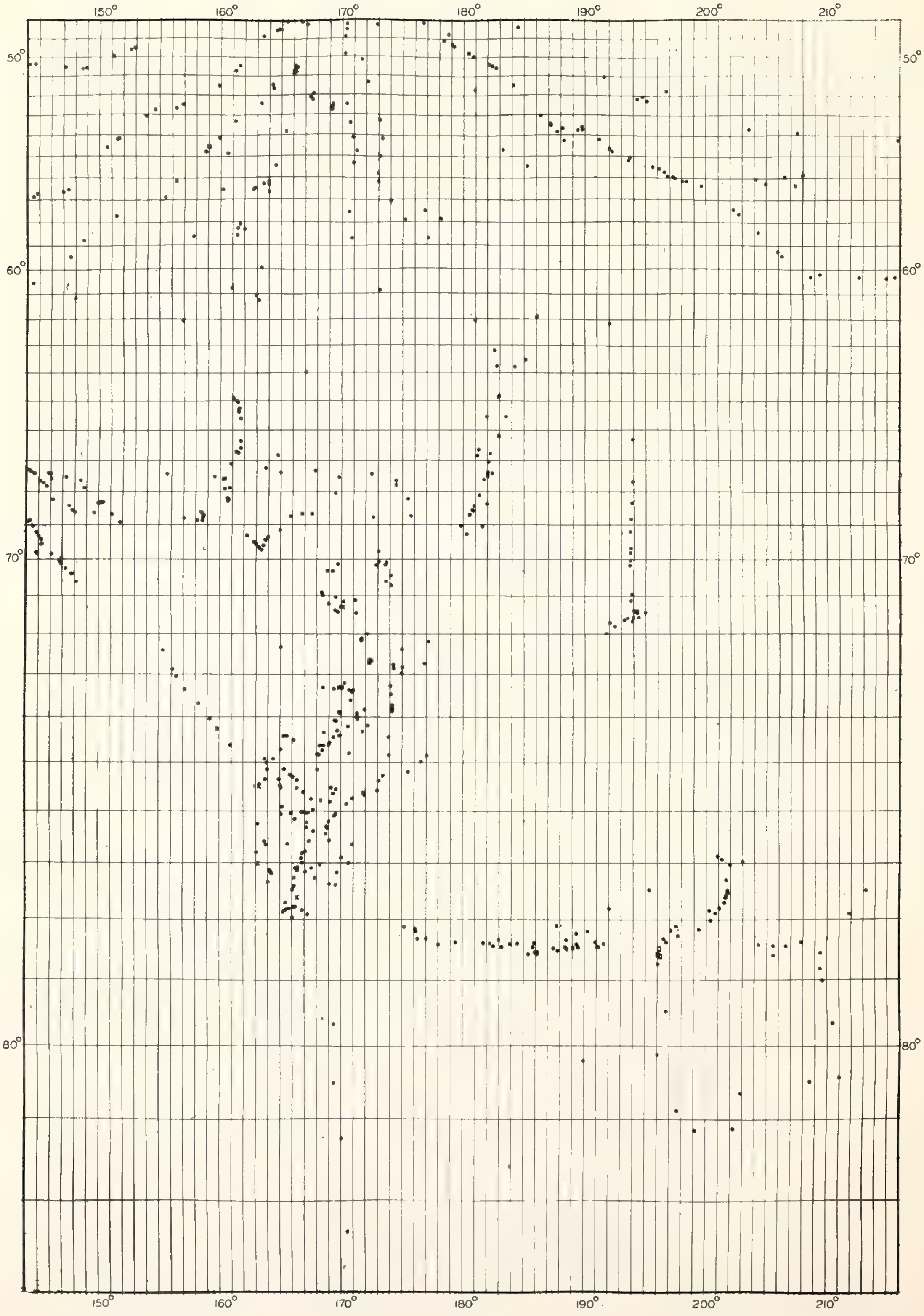

FIG. 2(M)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

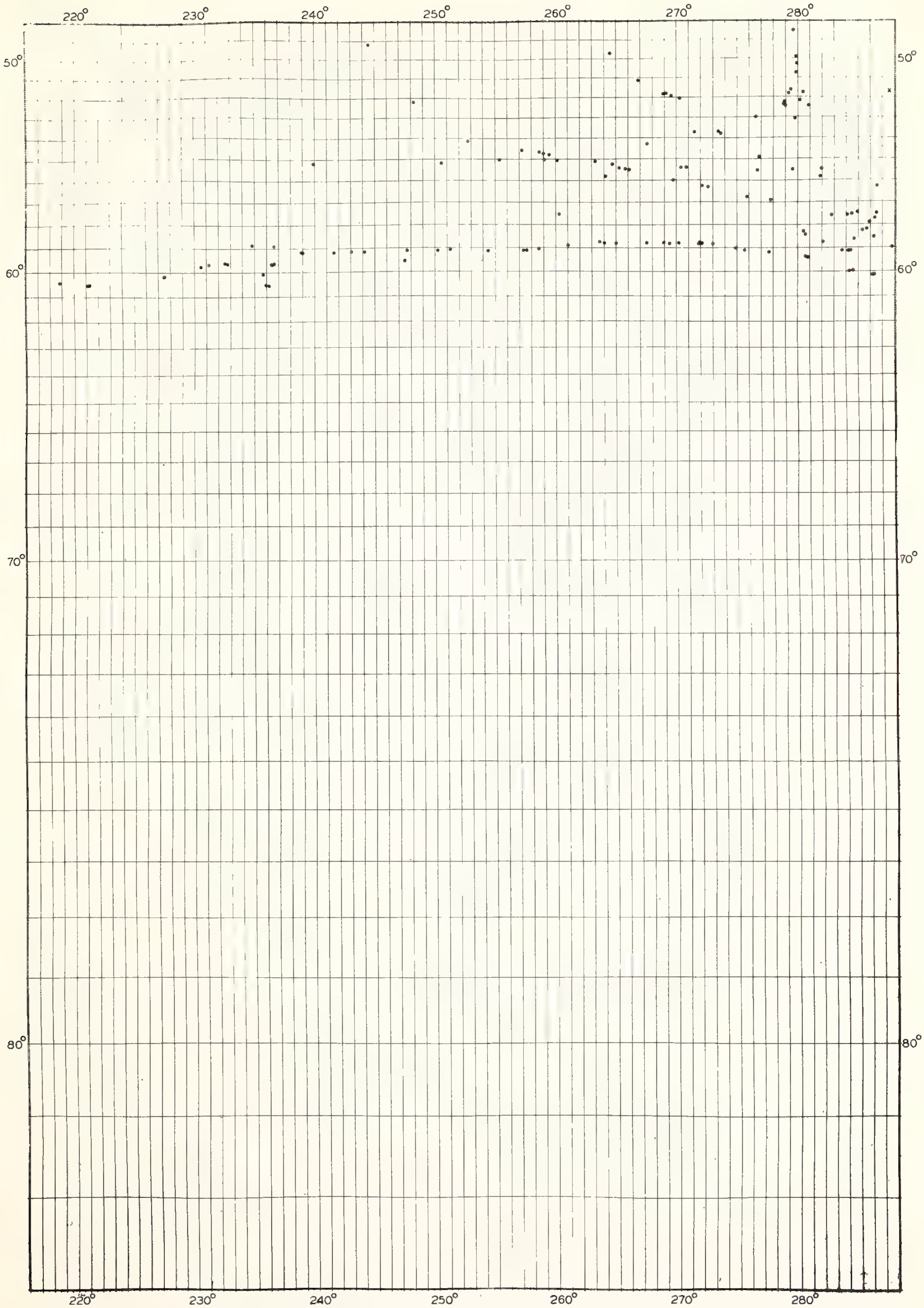

FIG. 2(N) — LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

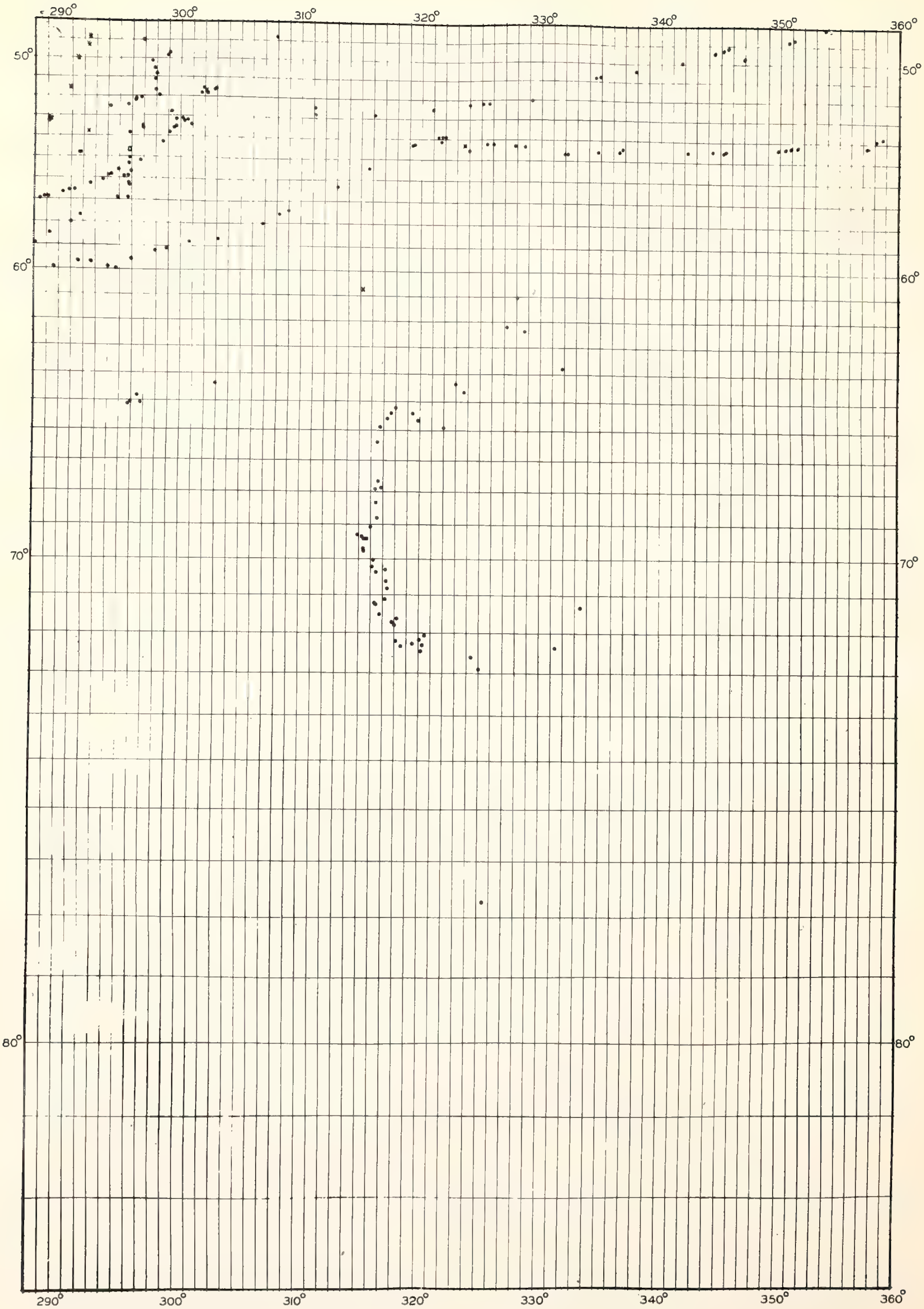

FIG. 2(O)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION

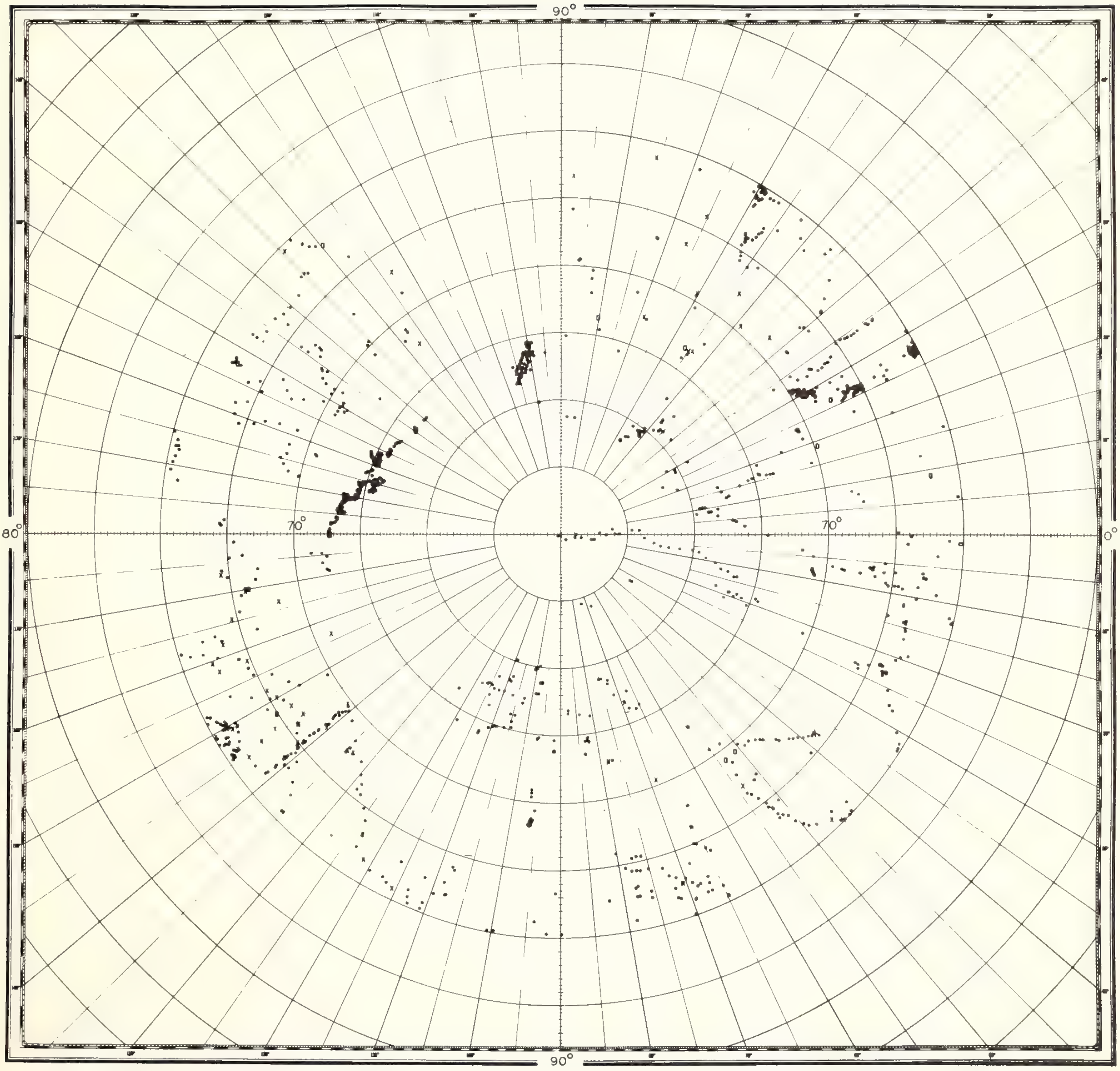

FIG. 2 (P)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION, NORTH POLAR REGION

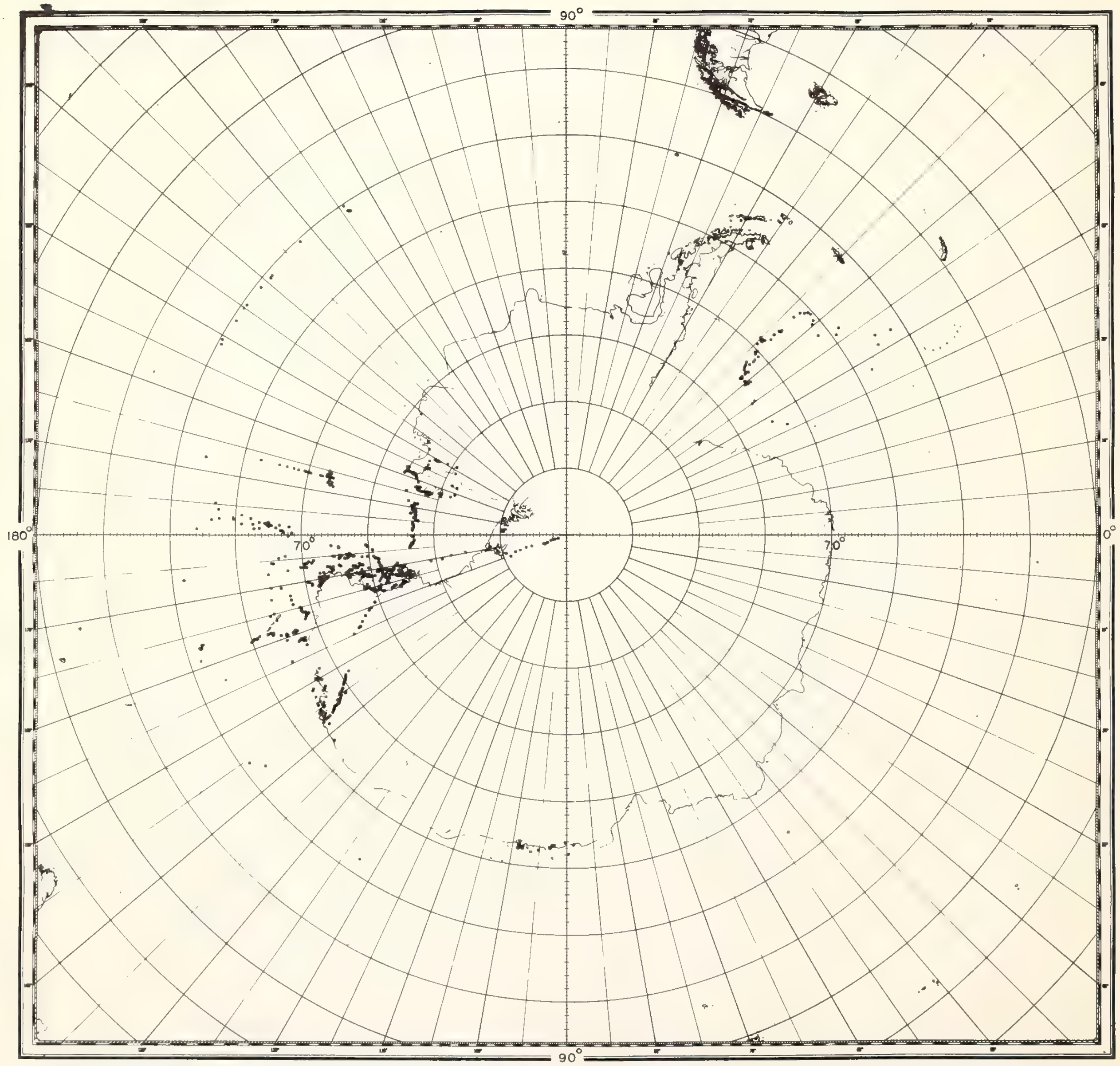

FIG. 2 (Q)—LOCATIONS MAGNETIC OBSERVATORIES, SURVEY-STATIONS, AND REPEAT STATIONS USED FOR DECLINATION, SOUTH POLAR REGION

CHAPTER III

PREPARATION OF TABLES FOR REDUCTION TO EPOCH

1. General considerations.--Geomagnetic fluctuations are in general fairly simple in field-distribution and show predominantly systematic features that can be determined for any previous time from records obtained at the observatories shown in sections A, B, and C of Figure 1, Chapter II. In order to determine accurately the secular changes and to construct isoporic charts on the basis of magnetic-survey measurements, one must apply corrections for these fluctuations.

2. Tables of departures.--Departures due to fluctuations, covering the 38-year period from 1905 to 1942 and applicable to survey-values, are presented in Tables 1-A to 1-X. With the exception of 1-O and 1-P, these tables are reproduced in full. By the use of these tables, the measured values of D, I, or H at any instant during the 38-year period may be approximately (1) reduced to the mean of the year centered at the middle of the month of observation and (2) corrected for the world-wide geomagnetic variation with sunspot-cycle.

Table 1-A gives to the nearest degree the geomagnetic latitude and longitude of a field-station according to the station's geographic coordinates. The use of geomagnetic coordinates simplifies corrections for fluctuations which are mainly symmetrical about the geomagnetic axis.

Table 1-B, giving decimal-equivalents of any date in a calendar year, facilitates the graphing of secular-change data. Tables 1-C to 1-F give the geomagnetic annual variation for each month and year from 1905 to 1942 with factors for determining the annual variation in any latitude.

Table 1-G is required in order to obtain the daily mean departures from the monthly means for each month and day from 1905 to 1942. This table permits the ready correction for influence of post-perturbation (after-effect of disturbance) on observed values of D, I, and H. Tables 1-H and 1-I give the multiplying factors necessary to adjust for latitude-variation the values in Table 1-G. The departures for RV are given in Tables 1-J and 1-K.

Tables 1-L, 1-M, and 1-N list average values of the solar daily variation depending only on latitude for each hour and each month from 1922 to 1933 (that is, for one sunspot-cycle); Tables 1-O and 1-P give that part of the solar daily variation which depends on longitude. These tables supply approximate reductions from mean of hour to mean of day, when used in conjunction with Table 1-Q which gives multiplying factors for each day from 1905 to 1942. After summation of the departures caused by geomagnetic fluctuations, the resulting values are converted by the use of multiplying factors taken from Tables 1-R, 1-S, and 1-T to give the variations in observed values for the three elements.

Infrequently, observations are made on magnetically disturbed days of character-number C of 1.5 or more. At such times, the disturbance daily variation, generally small in low and middle latitudes, may affect results. Tabulations of C for each day from 1905 to 1942, as in Table 1-U, supply information as to the degree of disturbance for any observation and thus tentatively may assist in determining relative weighting. Table 1-V provides a convenient means for converting Greenwich time to local time, and Table 1-W for converting arc to time. Table 1-X is used to correct seasonal values to monthly values in connection with Tables 1-O and 1-P.

Details of derivation of Tables 1-A to 1-X will be given in a later volume. In the next chapter is given a typical example of the application of the corrections determined by means of these tables, both in making reductions to epoch and determining secular change for a station, the station used being that designated Suez C.

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Table 1-A1--Geomagnetic latitudes of points on the Earth in various geographic latitudes and longitudes

Geographic latitude*	Geographic east longitude in degrees																																			
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
+88	79	79	79	79	78	78	78	78	78	78	77	77	77	77	77	77	77	77	77	77	77	77	76	76	77	77	77	77	77	77	77	77	77	77	77	78	78
+86	79	79	79	78	78	78	77	77	77	76	76	76	76	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	76	76	76	76	77
+84	79	79	78	78	77	77	76	76	75	75	75	74	74	74	74	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	74	74	74	75	75	75
+82	79	78	77	77	76	76	75	75	74	74	73	73	72	72	72	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	72	72	72	73	73	73	74
+80	78	77	76	76	75	74	74	73	73	72	71	71	71	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	70	70	70	71	71	72	72
+78	77	76	75	74	74	73	72	72	71	70	70	69	69	68	68	68	67	67	67	67	67	67	67	67	67	67	67	67	67	68	68	68	69	69	70	70	71
+76	75	75	74	73	72	71	71	70	69	69	68	68	67	67	66	66	65	65	65	65	65	65	65	65	65	65	65	65	65	66	66	66	67	67	68	68	69
+74	74	73	72	71	71	70	69	68	68	67	66	66	65	65	64	64	64	63	63	63	63	63	63	63	63	63	63	63	63	64	64	64	65	65	66	67	67
+72	73	72	71	70	69	68	67	66	66	65	64	64	63	63	62	62	62	61	61	61	61	61	61	61	61	61	61	61	61	62	62	63	63	64	64	65	65
+70	71	70	69	68	67	66	66	65	64	63	63	62	61	61	60	60	60	59	59	59	59	59	59	59	59	59	59	59	59	60	60	61	61	62	62	63	64
+68	69	68	67	66	65	65	64	63	62	61	61	60	60	59	58	58	58	57	57	57	57	57	57	57	57	57	57	57	57	58	58	59	59	60	60	61	62
+66	68	67	66	65	64	63	62	61	60	60	59	58	58	57	57	56	56	55	55	55	55	55	55	55	55	55	55	55	56	56	56	57	57	58	59	59	60
+64	66	65	64	63	62	61	60	59	58	58	57	56	56	55	55	54	54	53	53	53	53	53	53	53	53	53	53	53	54	54	54	55	55	56	57	57	58
+62	64	63	62	61	60	59	58	57	57	56	55	54	54	53	53	52	52	51	51	51	51	51	51	51	51	51	51	51	52	52	52	53	54	54	55	56	56
+60	62	61	60	59	58	57	56	56	55	54	53	52	52	51	51	50	50	49	49	49	49	49	49	49	49	49	49	49	50	50	50	51	52	52	53	54	54
+58	60	59	58	57	56	55	55	54	53	52	51	51	50	49	49	48	48	47	47	47	47	47	47	47	47	47	47	47	48	48	49	49	50	50	51	52	52
+56	58	57	56	56	55	54	53	52	51	50	49	49	48	47	47	46	46	45	45	45	45	45	45	45	45	45	45	45	46	46	47	47	48	48	49	50	51
+54	57	56	55	54	53	52	51	50	49	48	47	47	46	45	45	44	44	43	43	43	43	43	43	43	43	43	43	43	44	44	45	45	46	46	47	48	49
+52	55	54	53	52	51	50	49	48	47	46	45	45	44	43	43	42	42	41	41	41	41	41	41	41	41	41	41	41	42	42	43	43	44	44	45	46	47
+50	53	52	51	50	49	48	47	46	45	44	44	43	42	41	41	40	40	39	39	39	39	39	39	39	39	39	39	39	40	40	41	41	42	42	43	44	45
+48	51	50	49	48	47	46	45	44	43	42	42	41	40	39	39	38	38	37	37	37	37	37	37	37	37	37	37	37	38	38	39	39	40	41	41	42	43
+46	49	48	47	46	45	44	43	42	41	40	40	39	38	38	37	36	36	35	35	35	35	35	35	35	35	35	35	35	36	36	37	37	38	39	39	40	41
+44	47	46	45	44	43	42	41	40	39	38	38	37	36	36	35	34	34	34	33	33	33	33	33	33	33	33	33	33	34	34	35	35	36	37	37	38	39
+42	45	44	43	42	41	40	39	38	37	37	36	35	34	34	33	32	32	32	31	31	31	31	31	31	31	31	31	31	32	32	33	33	34	35	35	36	37
+40	43	42	41	40	39	38	37	36	35	35	34	33	32	32	31	30	30	30	29	29	29	29	29	29	29	29	29	29	30	30	31	31	32	33	33	34	35
+38	41	40	39	38	37	36	35	34	34	33	32	31	30	30	29	28	28	28	27	27	27	27	27	27	27	27	27	27	28	28	29	29	30	31	31	32	33
+36	39	38	37	36	35	34	33	32	32	31	30	29	28	28	27	26	26	26	25	25	25	25	25	25	25	25	25	25	26	26	27	27	28	29	30	30	31
+34	37	36	35	34	33	32	31	31	30	29	28	27	26	26	25	24	24	24	23	23	23	23	23	23	23	23	23	23	24	24	25	25	26	27	28	28	29
+32	35	34	33	32	31	30	30	29	28	27	26	25	24	24	23	23	22	22	21	21	21	21	21	21	21	21	21	21	22	22	23	23	24	25	26	26	27
+30	33	33	32	31	30	29	28	27	26	25	24	23	22	22	21	21	20	20	19	19	19	19	19	19	19	19	19	19	20	20	21	21	22	23	24	24	25

*North latitudes positive, south latitudes negative

Table 1-A1--Geomagnetic latitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude *	Geographic east longitude in degrees																																				
	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360
+88	78	78	78	78	78	78	79	79	79	79	79	79	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	79	79	79
+86	77	77	77	77	78	78	78	79	79	79	80	80	80	81	81	81	82	82	82	82	82	82	83	82	82	82	82	82	82	82	81	81	81	80	80	80	79
+84	75	76	76	76	77	77	78	78	79	79	80	80	81	82	82	82	83	83	84	84	84	84	84	84	84	84	84	83	83	83	82	82	81	81	80	80	79
+82	74	74	75	75	76	76	77	78	78	79	80	80	81	82	82	83	84	84	85	86	86	86	86	86	86	86	85	85	84	83	83	82	81	81	80	79	79
+80	72	73	73	74	75	75	76	77	77	78	79	80	81	82	82	83	84	85	86	87	87	88	88	88	88	87	86	85	85	84	83	82	81	80	79	79	78
+78	71	71	72	73	73	74	75	76	76	77	78	79	80	81	82	83	84	85	86	87	88	88	89	89	88	87	86	85	84	83	82	81	80	79	78	78	77
+76	69	70	70	71	72	73	73	74	75	76	77	78	79	80	81	82	83	84	85	86	86	87	87	87	87	86	85	84	83	82	81	80	79	78	77	76	75
+74	67	68	69	69	70	71	72	73	74	75	76	77	78	79	80	81	82	82	83	84	85	85	85	85	85	84	84	83	82	81	80	79	78	77	76	75	74
+72	65	66	67	68	69	69	70	71	72	73	74	75	76	77	78	79	80	81	82	82	83	83	83	83	83	83	82	81	80	79	78	77	76	76	75	74	73
+70	64	64	65	66	67	68	69	70	71	72	73	74	75	76	76	77	78	79	80	80	81	81	81	81	81	81	80	79	79	78	77	76	75	74	73	72	71
+68	62	63	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	77	78	79	79	79	79	79	79	79	78	78	77	76	75	74	73	72	71	70	69
+66	60	61	62	62	63	64	65	66	67	68	69	70	71	72	73	74	75	75	76	77	77	77	77	77	77	77	76	76	75	74	73	72	72	71	70	69	68
+64	58	59	60	61	62	62	63	64	65	66	67	68	69	70	71	72	73	74	74	75	75	75	75	75	75	75	74	74	73	72	72	71	70	69	68	67	66
+62	56	57	58	59	60	61	62	63	64	65	66	67	68	68	69	70	71	72	72	73	73	73	73	73	73	73	72	72	71	71	70	69	68	67	66	65	64
+60	54	55	56	57	58	59	60	61	62	63	64	65	66	67	67	68	69	70	70	71	71	71	71	71	71	71	71	70	69	69	68	67	66	65	64	63	62
+58	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	66	67	68	68	69	69	69	69	69	69	69	69	68	67	67	66	65	64	63	62	61	60
+56	51	51	52	53	54	55	56	57	58	59	60	61	62	63	64	64	65	66	66	67	67	67	67	67	67	67	67	66	65	65	64	63	62	61	60	59	58
+54	49	50	50	51	52	53	54	55	56	57	58	59	60	61	62	63	63	64	64	65	65	65	65	65	65	65	65	64	64	63	62	61	60	59	59	58	57
+52	47	48	48	49	50	51	52	53	54	55	56	57	58	59	60	61	61	62	62	63	63	63	63	63	63	63	63	62	62	61	60	59	58	58	57	56	55
+50	45	46	47	48	48	49	50	51	52	53	54	55	56	57	58	59	59	60	60	61	61	61	61	61	61	61	61	60	60	59	58	57	57	56	55	54	53
+48	43	44	45	46	47	48	49	50	50	51	52	53	54	55	56	57	57	58	58	59	59	59	59	59	59	59	59	58	58	57	56	55	55	54	53	52	51
+46	41	42	43	44	45	46	47	48	49	50	51	51	52	53	54	55	55	56	57	57	57	57	57	57	57	57	57	56	56	55	54	54	53	52	51	50	49
+44	39	40	41	42	43	44	45	46	47	48	49	50	50	51	52	53	53	54	55	55	55	55	55	55	55	55	55	54	54	53	52	52	51	50	49	48	47
+42	37	38	39	40	41	42	43	44	45	46	47	48	48	49	50	51	51	52	53	53	53	53	53	53	53	53	53	52	52	51	50	50	49	48	47	46	45
+40	35	36	37	38	39	40	41	42	43	44	45	46	47	47	48	49	50	50	51	51	51	51	51	51	51	51	51	50	50	49	48	48	47	46	45	44	43
+38	33	34	35	36	37	38	39	40	41	42	43	44	45	45	46	47	48	48	49	49	49	49	49	49	49	49	49	48	48	47	46	46	45	44	43	42	41
+36	31	32	33	34	35	36	37	38	39	40	41	42	43	43	44	45	46	46	47	47	47	47	47	47	47	47	47	46	46	45	45	44	43	42	41	40	39
+34	29	30	31	32	33	34	35	36	37	38	39	40	41	42	42	43	44	44	45	45	45	45	45	45	45	45	45	44	44	43	43	42	41	40	39	38	37
+32	27	28	29	30	31	32	33	34	35	36	37	38	39	40	40	41	42	42	43	43	43	43	43	43	43	43	43	42	42	41	41	40	39	38	37	36	35
+30	25	26	27	28	29	30	31	32	33	34	35	36	37	38	38	39	40	40	41	41	41	41	41	41	41	41	41	40	40	39	39	38	37	36	35	34	33

*North latitudes positive, south latitudes negative

Table 1-A1--Geomagnetic latitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude*	Geographic east longitude in degrees																																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
+28	32	31	30	29	28	27	26	25	24	23	22	21	20	20	19	19	18	18	17	17	17	17	17	17	17	17	17	17	18	18	19	19	20	21	22	23	23
+26	30	29	28	27	26	25	24	23	22	21	20	19	18	18	17	17	16	16	15	15	15	15	15	15	15	15	15	15	16	16	17	18	18	19	20	21	21
+24	28	27	26	25	24	23	22	21	20	19	18	17	17	16	15	15	14	14	13	13	13	13	13	13	13	13	13	13	14	14	15	16	16	17	18	19	19
+22	26	25	24	23	22	21	20	19	18	17	16	15	15	14	13	13	12	12	11	11	11	11	11	11	11	11	11	11	12	12	13	14	14	15	16	17	18
+20	24	23	22	21	20	19	18	17	16	15	14	13	13	12	11	11	10	10	9	9	9	9	9	9	9	9	9	9	10	10	11	12	12	13	14	15	16
+18	22	21	20	19	18	17	16	15	14	13	12	11	11	10	9	9	8	8	7	7	7	7	7	7	7	7	7	7	8	8	9	10	10	11	12	13	14
+16	20	19	18	17	16	15	14	13	12	11	10	9	9	8	7	7	6	6	5	5	5	5	5	5	5	5	5	5	6	6	7	8	8	9	10	11	12
+14	18	17	16	15	14	13	12	11	10	9	8	7	7	6	5	5	4	4	3	3	3	3	3	3	3	3	3	3	4	4	5	6	6	7	8	9	10
+12	16	15	14	13	12	11	10	9	8	7	6	5	5	4	3	3	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	4	4	5	6	7	8
+10	14	13	12	11	10	9	8	7	6	5	4	3	3	2	1	1	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	1	2	2	3	4	5	6
+8	12	11	10	9	8	7	6	5	4	3	2	1	1	0	-1	-1	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-2	-1	0	0	1	2	3	4
+6	10	9	8	7	6	5	4	3	2	1	0	0	-1	-2	-3	-3	-4	-4	-5	-5	-5	-5	-5	-5	-5	-5	-5	-4	-4	-4	-3	-2	-2	-1	0	1	2
+4	8	7	6	5	4	3	2	1	0	-1	-2	-2	-3	-4	-5	-5	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-6	-5	-4	-4	-3	-2	-1	0
+2	6	5	4	3	2	1	0	-1	-2	-3	-4	-4	-5	-6	-7	-7	-8	-8	-9	-9	-9	-9	-9	-9	-9	-9	-9	-8	-8	-8	-7	-6	-6	-5	-4	-3	-2
0	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-6	-7	-8	-9	-9	-10	-10	-11	-11	-11	-11	-11	-11	-11	-11	-11	-10	-10	-10	-9	-8	-8	-7	-6	-5	-4
-2	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-8	-9	-10	-11	-11	-12	-12	-13	-13	-13	-13	-13	-13	-13	-13	-13	-12	-12	-11	-11	-10	-9	-9	-8	-7	-6
-4	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-9	-10	-11	-12	-13	-13	-14	-14	-15	-15	-15	-15	-15	-15	-15	-15	-15	-14	-14	-13	-13	-12	-11	-11	-10	-9	-8
-6	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-11	-12	-13	-14	-15	-15	-16	-16	-17	-17	-17	-17	-17	-17	-17	-17	-17	-16	-16	-15	-15	-14	-13	-13	-12	-11	-10
-8	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-13	-14	-15	-16	-17	-17	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19	-19	-18	-18	-17	-17	-16	-15	-15	-14	-13	-12
-10	-6	-7	-8	-9	-10	-11	-12	-13	-14	-14	-15	-16	-17	-18	-19	-19	-20	-20	-21	-21	-21	-21	-21	-21	-21	-21	-21	-20	-20	-19	-19	-18	-17	-17	-16	-15	-14
-12	-8	-9	-10	-11	-12	-13	-14	-15	-15	-16	-17	-18	-19	-20	-21	-21	-22	-22	-23	-23	-23	-23	-23	-23	-23	-23	-23	-22	-22	-21	-21	-20	-19	-19	-18	-17	-16
-14	-10	-11	-12	-13	-14	-15	-16	-16	-17	-18	-19	-20	-21	-22	-23	-23	-24	-24	-25	-25	-25	-25	-25	-25	-25	-25	-25	-24	-24	-23	-23	-22	-21	-21	-20	-19	-18
-16	-12	-13	-14	-14	-15	-16	-17	-18	-19	-20	-21	-22	-23	-24	-24	-25	-26	-26	-27	-27	-27	-27	-27	-27	-27	-27	-27	-26	-26	-25	-25	-24	-23	-22	-22	-21	-20
-18	-14	-15	-15	-16	-17	-18	-19	-20	-21	-22	-23	-24	-25	-26	-26	-27	-28	-28	-29	-29	-29	-29	-29	-29	-29	-29	-29	-28	-28	-27	-27	-26	-25	-24	-24	-23	-22
-20	-16	-16	-17	-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28	-28	-29	-30	-30	-31	-31	-31	-31	-31	-31	-31	-31	-31	-30	-30	-29	-29	-28	-27	-26	-26	-25	-24
-22	-18	-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30	-30	-31	-32	-32	-33	-33	-33	-33	-33	-33	-33	-33	-33	-32	-32	-31	-31	-30	-29	-28	-28	-27	-26
-24	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30	-31	-32	-32	-33	-34	-34	-35	-35	-35	-35	-35	-35	-35	-35	-35	-34	-34	-33	-33	-32	-31	-30	-29	-29	-28
-26	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30	-31	-32	-33	-34	-34	-35	-36	-36	-37	-37	-37	-37	-37	-37	-37	-37	-37	-36	-36	-35	-35	-34	-33	-32	-31	-31	-30
-28	-23	-24	-25	-26	-27	-28	-29	-30	-31	-32	-33	-34	-35	-36	-36	-37	-38	-38	-39	-39	-39	-39	-39	-39	-39	-39	-39	-38	-38	-37	-37	-36	-35	-34	-33	-32	-32
-30	-25	-26	-27	-28	-29	-30	-31	-32	-33	-34	-35	-36	-37	-38	-38	-39	-40	-40	-41	-41	-41	-41	-41	-41	-41	-41	-41	-40	-40	-39	-39	-38	-37	-36	-35	-34	-33

*North latitudes positive, south latitudes negative

Table 1-A1--Geomagnetic latitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude*	Geographic east longitude in degrees																																				
	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360
+28	23	24	25	26	27	28	29	30	31	32	33	34	35	36	36	37	38	38	39	39	39	39	39	39	39	39	39	38	38	37	37	36	35	34	33	32	32
+26	21	22	23	24	25	26	27	28	29	30	31	32	33	34	34	35	36	36	37	37	37	37	37	37	37	37	37	36	36	35	35	34	33	32	31	31	30
+24	19	20	21	22	23	24	25	26	27	28	29	30	31	32	32	33	34	34	35	35	35	35	35	35	35	35	35	34	34	33	33	32	31	30	29	29	28
+22	18	18	19	20	21	22	23	24	25	26	27	28	29	30	30	31	32	32	33	33	33	33	33	33	33	33	33	32	32	31	31	30	29	28	28	27	26
+20	16	16	17	18	19	20	21	22	23	24	25	26	27	28	28	29	30	30	31	31	31	31	31	31	31	31	31	30	30	29	29	28	27	26	26	25	24
+18	14	15	15	16	17	18	19	20	21	22	23	24	25	26	26	27	28	28	29	29	29	29	29	29	29	29	29	28	28	27	27	26	25	24	24	23	22
+16	12	13	14	14	15	16	17	18	19	20	21	22	23	24	24	25	26	26	27	27	27	27	27	27	27	27	27	26	26	25	25	24	23	22	22	21	20
+14	10	11	12	13	14	15	16	16	17	18	19	20	21	22	23	23	24	24	25	25	25	25	25	25	25	25	25	24	24	23	23	22	21	21	20	19	18
+12	8	9	10	11	12	13	14	15	15	16	17	18	19	20	21	21	22	22	23	23	23	23	23	23	23	23	23	22	22	21	21	20	19	19	18	17	16
+10	6	7	8	9	10	11	12	13	14	14	15	16	17	18	19	19	20	20	21	21	21	21	21	21	21	21	21	20	20	19	19	18	17	17	16	15	14
+ 8	4	5	6	7	8	9	10	11	12	13	13	14	15	16	17	17	18	18	19	19	19	19	19	19	19	19	19	18	18	17	17	16	15	15	14	13	12
+ 6	2	3	4	5	6	7	8	9	10	11	11	12	13	14	15	15	16	16	17	17	17	17	17	17	17	17	17	16	16	15	15	14	13	13	12	11	10
+ 4	0	1	2	3	4	5	6	7	8	9	9	10	11	12	13	13	14	14	15	15	15	15	15	15	15	15	15	14	14	13	13	12	11	11	10	9	8
+ 2	- 2	- 1	0	1	2	3	4	5	6	7	8	8	9	10	11	11	12	12	13	13	13	13	13	13	13	13	13	12	12	11	11	10	9	9	8	7	6
0	- 4	- 3	- 2	- 1	0	1	2	3	4	5	6	6	7	8	9	9	10	10	11	11	11	11	11	11	11	11	11	10	10	10	9	8	8	7	6	5	4
- 2	- 6	- 5	- 4	- 3	- 2	- 1	0	1	2	3	4	4	5	6	7	7	8	8	9	9	9	9	9	9	9	9	9	8	8	8	7	6	6	5	4	3	2
- 4	- 8	- 7	- 6	- 5	- 4	- 3	- 2	- 1	0	1	2	2	3	4	5	5	6	6	7	7	7	7	7	7	7	7	7	6	6	6	5	4	4	3	2	1	0
- 6	-10	- 9	- 8	- 7	- 6	- 5	- 4	- 3	- 2	- 1	0	0	1	2	3	3	4	4	5	5	5	5	5	5	5	5	5	4	4	4	3	2	2	1	0	- 1	- 2
- 8	-12	-11	-10	- 9	- 8	- 7	- 6	- 5	- 4	- 3	- 2	- 1	- 1	0	1	1	2	2	3	3	3	3	3	3	3	3	3	3	2	2	1	0	0	- 1	- 2	- 3	- 4
-10	-14	-13	-12	-11	-10	- 9	- 8	- 7	- 6	- 5	- 4	- 3	- 3	- 2	- 1	- 1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	- 1	- 2	- 2	- 3	- 4	- 5	- 6
-12	-16	-15	-14	-13	-12	-11	-10	- 9	- 8	- 7	- 6	- 5	- 5	- 4	- 3	- 3	- 2	- 2	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 1	- 2	- 2	- 3	- 4	- 4	- 5	- 6	- 7	- 8
-14	-18	-17	-16	-15	-14	-13	-12	-11	-10	- 9	- 8	- 7	- 7	- 6	- 5	- 5	- 4	- 4	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 4	- 4	- 5	- 6	- 6	- 7	- 8	- 9	-10
-16	-20	-19	-18	-17	-16	-15	-14	-13	-12	-11	-10	- 9	- 9	- 8	- 7	- 7	- 6	- 6	- 5	- 5	- 5	- 5	- 5	- 5	- 5	- 5	- 5	- 5	- 6	- 6	- 7	- 8	- 8	- 9	-10	-11	-12
-18	-22	-21	-20	-19	-18	-17	-16	-15	-14	-13	-12	-11	-11	-10	- 9	- 9	- 8	- 8	- 7	- 7	- 7	- 7	- 7	- 7	- 7	- 7	- 7	- 7	- 8	- 8	- 9	-10	-10	-11	-12	-13	-14
-20	-24	-23	-22	-21	-20	-19	-18	-17	-16	-15	-14	-13	-13	-12	-11	-11	-10	-10	- 9	- 9	- 9	- 9	- 9	- 9	- 9	- 9	- 9	- 9	-10	-10	-11	-12	-12	-13	-14	-15	-16
-22	-26	-25	-24	-23	-22	-21	-20	-19	-18	-17	-16	-15	-15	-14	-13	-13	-12	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-12	-13	-14	-14	-15	-16	-17	-18
-24	-28	-27	-26	-25	-24	-23	-22	-21	-20	-19	-18	-17	-17	-16	-15	-15	-14	-14	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-14	-14	-15	-16	-16	-17	-18	-19	-19
-26	-30	-29	-28	-27	-26	-25	-24	-23	-22	-21	-20	-19	-18	-18	-17	-17	-16	-16	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-16	-16	-17	-18	-18	-19	-20	-21	-21
-28	-32	-31	-30	-29	-28	-27	-26	-25	-24	-23	-22	-21	-20	-20	-19	-19	-18	-18	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-18	-18	-19	-19	-20	-21	-22	-23	-23
-30	-33	-33	-32	-31	-30	-29	-28	-27	-26	-25	-24	-23	-22	-22	-21	-21	-20	-20	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-20	-20	-21	-21	-22	-23	-24	-24	-25

*North latitudes positive, south latitudes negative

Table 1-A1--Geomagnetic latitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude*	Geographic east longitude in degrees																																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
-32	-27	-28	-29	-30	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40	-40	-41	-42	-42	-43	-43	-43	-43	-43	-43	-43	-43	-43	-42	-42	-41	-41	-40	-39	-38	-37	-36	-35
-34	-29	-30	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40	-41	-42	-42	-43	-44	-44	-45	-45	-45	-45	-45	-45	-45	-45	-45	-44	-44	-43	-43	-42	-41	-40	-39	-38	-37
-36	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40	-41	-42	-43	-43	-44	-45	-46	-46	-47	-47	-47	-47	-47	-47	-47	-47	-47	-46	-46	-45	-45	-44	-43	-42	-41	-40	-39
-38	-33	-34	-35	-36	-37	-38	-39	-40	-41	-42	-43	-44	-45	-45	-46	-47	-48	-48	-49	-49	-49	-49	-49	-49	-49	-49	-49	-48	-48	-47	-46	-46	-45	-44	-43	-42	-41
-40	-35	-36	-37	-38	-39	-40	-41	-42	-43	-44	-45	-46	-47	-47	-48	-49	-50	-50	-51	-51	-51	-51	-51	-51	-51	-51	-51	-50	-50	-49	-48	-48	-47	-46	-45	-44	-43
-42	-37	-38	-39	-40	-41	-42	-43	-44	-45	-46	-47	-48	-48	-49	-50	-51	-51	-52	-53	-53	-53	-53	-53	-53	-53	-53	-53	-52	-52	-51	-50	-50	-49	-48	-47	-46	-45
-44	-39	-40	-41	-42	-43	-44	-45	-46	-47	-48	-49	-50	-50	-51	-52	-53	-53	-54	-55	-55	-55	-55	-55	-55	-55	-55	-55	-54	-54	-53	-52	-52	-51	-50	-49	-48	-47
-46	-41	-42	-43	-44	-45	-46	-47	-48	-49	-50	-51	-51	-52	-53	-54	-55	-55	-56	-57	-57	-57	-57	-57	-57	-57	-57	-57	-56	-56	-55	-54	-54	-53	-52	-51	-50	-49
-48	-43	-44	-45	-46	-47	-48	-49	-50	-50	-51	-52	-53	-54	-55	-56	-57	-57	-58	-58	-59	-59	-59	-59	-59	-59	-59	-59	-58	-58	-57	-56	-55	-55	-54	-53	-52	-51
-50	-45	-46	-47	-48	-48	-49	-50	-51	-52	-53	-54	-55	-56	-57	-58	-59	-59	-60	-60	-61	-61	-61	-61	-61	-61	-61	-61	-60	-60	-59	-58	-57	-57	-56	-55	-54	-53
-52	-47	-48	-48	-49	-50	-51	-52	-53	-54	-55	-56	-57	-58	-59	-60	-61	-61	-62	-62	-63	-63	-63	-63	-63	-63	-63	-63	-62	-62	-61	-60	-59	-58	-58	-57	-56	-55
-54	-49	-50	-50	-51	-52	-53	-54	-55	-56	-57	-58	-59	-60	-61	-62	-63	-63	-64	-64	-65	-65	-65	-65	-65	-65	-65	-65	-64	-64	-63	-62	-61	-60	-59	-59	-58	-57
-56	-51	-51	-52	-53	-54	-55	-56	-57	-58	-59	-60	-61	-62	-63	-64	-64	-65	-66	-66	-67	-67	-67	-67	-67	-67	-67	-67	-66	-65	-65	-64	-63	-62	-61	-60	-59	-58
-58	-52	-53	-54	-55	-56	-57	-58	-59	-60	-61	-62	-63	-64	-65	-66	-66	-67	-68	-68	-69	-69	-69	-69	-69	-69	-69	-69	-68	-67	-67	-66	-65	-64	-63	-62	-61	-60
-60	-54	-55	-56	-57	-58	-59	-60	-61	-62	-63	-64	-65	-66	-67	-67	-68	-69	-70	-70	-71	-71	-71	-71	-71	-71	-71	-71	-70	-69	-69	-68	-67	-66	-65	-64	-63	-62
-62	-56	-57	-58	-59	-60	-61	-62	-63	-64	-65	-66	-67	-68	-68	-69	-70	-71	-72	-72	-73	-73	-73	-73	-73	-73	-73	-72	-72	-71	-71	-70	-69	-68	-67	-66	-65	-64
-64	-58	-59	-60	-61	-62	-62	-63	-64	-65	-66	-67	-68	-69	-70	-71	-72	-73	-74	-74	-75	-75	-75	-75	-75	-75	-75	-74	-74	-73	-72	-72	-71	-70	-69	-68	-67	-66
-66	-60	-61	-62	-62	-63	-64	-65	-66	-67	-68	-69	-70	-71	-72	-73	-74	-75	-75	-76	-77	-77	-77	-77	-77	-77	-77	-76	-76	-75	-74	-73	-72	-72	-71	-70	-69	-68
-68	-62	-63	-63	-64	-65	-66	-67	-68	-69	-70	-71	-72	-73	-74	-75	-76	-77	-77	-78	-79	-79	-79	-79	-79	-79	-79	-78	-78	-77	-76	-75	-74	-73	-72	-71	-70	-69
-70	-64	-64	-65	-66	-67	-68	-69	-70	-71	-72	-73	-74	-75	-76	-76	-77	-78	-79	-80	-80	-81	-81	-81	-81	-81	-81	-80	-79	-79	-78	-77	-76	-75	-74	-73	-72	-71
-72	-65	-66	-67	-68	-69	-69	-70	-71	-72	-73	-74	-75	-76	-77	-78	-79	-80	-81	-82	-82	-83	-83	-83	-83	-83	-83	-82	-81	-80	-79	-78	-77	-76	-76	-75	-74	-73
-74	-67	-68	-69	-69	-70	-71	-72	-73	-74	-75	-76	-77	-78	-79	-80	-81	-82	-82	-83	-84	-85	-85	-85	-85	-85	-84	-84	-83	-82	-81	-80	-79	-78	-77	-76	-75	-74
-76	-69	-70	-70	-71	-72	-73	-73	-74	-75	-76	-77	-78	-79	-80	-81	-82	-83	-84	-85	-86	-86	-87	-87	-87	-87	-86	-85	-84	-83	-82	-81	-80	-79	-78	-77	-76	-75
-78	-71	-71	-72	-73	-73	-74	-75	-76	-76	-77	-78	-79	-80	-81	-82	-83	-84	-85	-86	-87	-88	-88	-89	-89	-88	-87	-86	-85	-84	-83	-82	-81	-80	-79	-78	-78	-77
-80	-72	-73	-73	-74	-75	-75	-76	-77	-77	-78	-79	-80	-81	-82	-82	-83	-84	-85	-86	-87	-87	-88	-88	-88	-88	-87	-86	-85	-84	-84	-83	-82	-81	-80	-79	-79	-78
-82	-74	-74	-75	-75	-76	-76	-77	-78	-78	-79	-80	-80	-81	-82	-82	-83	-84	-84	-85	-86	-86	-86	-86	-86	-86	-86	-85	-85	-84	-83	-83	-82	-81	-81	-80	-79	-79
-84	-75	-76	-76	-76	-77	-77	-78	-78	-79	-79	-80	-80	-81	-82	-82	-82	-83	-83	-84	-84	-84	-84	-84	-84	-84	-84	-84	-83	-83	-83	-82	-82	-81	-81	-80	-80	-79
-86	-77	-77	-77	-77	-78	-78	-78	-79	-79	-79	-80	-80	-80	-81	-81	-81	-82	-82	-82	-82	-82	-82	-83	-82	-82	-82	-82	-82	-82	-82	-81	-81	-81	-80	-80	-80	-79
-88	-78	-78	-78	-78	-78	-78	-79	-79	-79	-79	-79	-79	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-80	-79	-79	-79

*North latitudes positive, south latitudes negative

Table 1-A1--Geomagnetic latitudes of points on the Earth in various geographic latitudes and longitudes--Concluded

Geographic latitude*	Geographic east longitude in degrees																																			
	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360
-32	-35	-34	-33	-32	-31	-30	-30	-29	-28	-27	-26	-25	-24	-24	-23	-23	-22	-22	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-22	-22	-23	-23	-24	-25	-26	-26	-27
-34	-37	-36	-35	-34	-33	-32	-31	-31	-30	-29	-28	-27	-26	-26	-25	-24	-24	-24	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-24	-24	-25	-25	-26	-27	-28	-28	-29
-36	-39	-38	-37	-36	-35	-34	-33	-32	-32	-31	-30	-29	-28	-28	-27	-26	-26	-26	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25	-26	-26	-27	-27	-28	-29	-30	-30	-31
-38	-41	-40	-39	-38	-37	-36	-35	-34	-34	-33	-32	-31	-30	-30	-29	-28	-28	-28	-27	-27	-27	-27	-27	-27	-27	-27	-27	-27	-28	-28	-29	-29	-30	-31	-31	-32	-33
-40	-43	-42	-41	-40	-39	-38	-37	-36	-35	-35	-34	-33	-32	-32	-31	-30	-30	-30	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-30	-30	-31	-31	-32	-33	-33	-34	-35
-42	-45	-44	-43	-42	-41	-40	-39	-38	-37	-37	-36	-35	-34	-34	-33	-32	-32	-32	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31	-32	-32	-33	-33	-34	-35	-35	-36	-37
-44	-47	-46	-45	-44	-43	-42	-41	-40	-39	-38	-38	-37	-36	-36	-35	-34	-34	-34	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-34	-34	-35	-35	-36	-37	-37	-38	-39
-46	-49	-48	-47	-46	-45	-44	-43	-42	-41	-40	-40	-39	-38	-38	-37	-36	-36	-35	-35	-35	-35	-35	-35	-35	-35	-35	-35	-35	-36	-36	-37	-37	-38	-39	-39	-40	-41
-48	-51	-50	-49	-48	-47	-46	-45	-44	-43	-42	-42	-41	-40	-39	-39	-38	-38	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-38	-38	-39	-39	-40	-41	-41	-42	-43
-50	-53	-52	-51	-50	-49	-48	-47	-46	-45	-44	-44	-43	-42	-41	-41	-40	-40	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-40	-40	-41	-41	-42	-42	-43	-44	-45
-52	-55	-54	-53	-52	-51	-50	-49	-48	-47	-46	-45	-45	-44	-43	-43	-42	-42	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-42	-42	-43	-43	-44	-44	-45	-46	-47
-54	-57	-56	-55	-54	-53	-52	-51	-50	-49	-48	-47	-47	-46	-45	-45	-44	-44	-43	-43	-43	-43	-43	-43	-43	-43	-43	-43	-43	-44	-44	-45	-45	-46	-46	-47	-48	-49
-56	-58	-57	-56	-55	-55	-54	-53	-52	-51	-50	-49	-49	-48	-47	-47	-46	-46	-45	-45	-45	-45	-45	-45	-45	-45	-45	-45	-45	-46	-46	-47	-47	-48	-48	-49	-50	-51
-58	-60	-59	-58	-57	-56	-55	-55	-54	-53	-52	-51	-51	-50	-49	-49	-48	-48	-47	-47	-47	-47	-47	-47	-47	-47	-47	-47	-47	-48	-48	-49	-49	-50	-50	-51	-52	-52
-60	-62	-61	-60	-59	-58	-57	-56	-56	-55	-54	-53	-52	-52	-51	-51	-50	-50	-49	-49	-49	-49	-49	-49	-49	-49	-49	-49	-49	-50	-50	-50	-51	-52	-52	-53	-54	-54
-62	-64	-63	-62	-61	-60	-59	-58	-57	-57	-56	-55	-54	-54	-53	-53	-52	-52	-51	-51	-51	-51	-51	-51	-51	-51	-51	-51	-51	-52	-52	-52	-53	-54	-54	-55	-56	-56
-64	-66	-65	-64	-63	-62	-61	-60	-59	-58	-58	-57	-56	-56	-55	-55	-54	-54	-53	-53	-53	-53	-53	-53	-53	-53	-53	-53	-53	-54	-54	-54	-55	-55	-56	-57	-57	-58
-66	-68	-67	-66	-65	-64	-63	-62	-61	-60	-60	-59	-58	-58	-57	-57	-56	-56	-55	-55	-55	-55	-55	-55	-55	-55	-55	-55	-55	-56	-56	-56	-57	-57	-58	-59	-59	-60
-68	-69	-68	-67	-66	-65	-65	-64	-63	-62	-61	-61	-60	-60	-59	-58	-58	-58	-57	-57	-57	-57	-57	-57	-57	-57	-57	-57	-57	-57	-58	-58	-59	-59	-60	-60	-61	-62
-70	-71	-70	-69	-68	-67	-66	-66	-65	-64	-63	-63	-62	-61	-61	-60	-60	-60	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59	-60	-60	-61	-61	-62	-62	-63	-64
-72	-73	-72	-71	-70	-69	-68	-67	-66	-66	-65	-64	-64	-63	-63	-62	-62	-62	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-62	-62	-63	-63	-64	-64	-65	-65
-74	-74	-73	-72	-71	-71	-70	-69	-68	-68	-67	-66	-66	-65	-65	-64	-64	-64	-63	-63	-63	-63	-63	-63	-63	-63	-63	-63	-63	-63	-64	-64	-64	-65	-65	-66	-67	-67
-76	-75	-75	-74	-73	-72	-71	-71	-70	-69	-69	-68	-68	-67	-67	-66	-66	-65	-65	-65	-65	-65	-65	-65	-65	-65	-65	-65	-65	-65	-66	-66	-66	-67	-67	-68	-68	-69
-78	-77	-76	-75	-74	-74	-73	-72	-72	-71	-70	-70	-69	-69	-68	-68	-68	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-68	-68	-68	-69	-69	-70	-70	-71
-80	-78	-77	-76	-76	-75	-74	-74	-73	-73	-72	-71	-71	-71	-70	-70	-70	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-69	-70	-70	-70	-71	-71	-72	-72
-82	-79	-78	-77	-77	-76	-76	-75	-75	-74	-74	-73	-73	-72	-72	-72	-71	-71	-71	-71	-71	-71	-71	-71	-71	-71	-71	-71	-71	-71	-71	-72	-72	-72	-73	-73	-73	-74
-84	-79	-79	-78	-78	-77	-77	-76	-76	-75	-75	-75	-74	-74	-74	-74	-73	-73	-73	-73	-73	-73	-73	-73	-73	-73	-73	-73	-73	-73	-73	-73	-74	-74	-74	-75	-75	-75
-86	-79	-79	-79	-78	-78	-78	-77	-77	-77	-76	-76	-76	-76	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-76	-76	-76	-76	-77
-88	-79	-79	-79	-79	-78	-78	-78	-78	-78	-78	-77	-77	-77	-77	-77	-77	-77	-77	-77	-77	-77	-77	-76	-76	-77	-77	-77	-77	-77	-77	-77	-77	-77	-77	-77	-78	-78

*North latitudes positive, south latitudes negative

Table 1-A2--Geomagnetic longitudes of points on the Earth in various geographic latitudes and longitudes

Geographic latitude*	Geographic east longitude in degrees																																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
+88	170	170	170	170	170	170	170	171	171	171	172	172	173	174	174	175	175	176	177	178	178	179	180	181	181	182	183	184	184	185	186	186	187	187	188	188	189
+86	159	160	160	160	161	161	162	163	163	164	165	166	167	168	170	171	172	173	175	176	177	178	180	181	182	184	185	186	187	189	190	191	192	193	194	195	196
+84	149	150	150	151	152	153	154	155	157	158	160	161	163	164	166	168	169	171	173	174	176	178	180	181	183	185	187	188	190	192	193	195	197	198	200	201	203
+82	139	140	141	143	144	146	148	150	151	153	155	157	159	161	163	165	167	169	171	173	175	177	180	182	184	186	188	190	192	194	196	198	200	202	204	206	208
+80	130	132	134	136	138	140	142	145	147	149	151	154	156	158	161	163	165	168	170	172	175	177	180	182	184	187	189	191	194	196	198	201	203	205	208	210	212
+78	122	125	127	130	133	135	138	140	143	146	148	151	153	156	159	161	164	166	169	172	174	177	179	182	185	187	190	193	195	198	200	203	206	208	211	213	216
+76	116	119	122	125	128	131	134	137	140	143	146	148	151	154	157	160	163	165	168	171	174	177	179	182	185	188	191	194	196	199	202	205	208	211	213	216	219
+74	110	114	117	121	124	127	131	134	137	140	143	146	149	152	155	158	162	164	167	170	173	176	179	182	185	188	191	194	197	200	203	206	209	213	216	219	222
+72	106	110	113	117	121	124	128	131	135	138	141	144	148	151	154	157	160	164	167	170	173	176	179	183	186	189	192	195	198	201	205	208	211	214	217	221	224
+70	102	106	110	114	118	122	125	129	133	136	139	143	146	150	153	156	160	163	166	170	173	176	179	183	186	189	192	196	199	202	206	209	212	216	219	223	226
+68	99	103	107	111	116	119	123	127	131	134	138	141	145	148	152	155	159	162	166	169	173	176	179	183	186	190	193	196	200	203	207	210	214	217	221	224	228
+66	96	100	105	109	113	117	121	125	129	133	136	140	144	147	151	155	158	162	165	169	172	176	179	183	186	190	193	197	200	204	207	211	215	218	222	226	229
+64	93	98	103	107	111	116	120	124	128	131	135	139	143	147	150	154	158	161	165	168	172	176	179	183	186	190	194	197	201	205	208	212	216	219	223	227	231
+62	91	96	101	105	110	114	118	122	126	130	134	138	142	146	150	153	157	161	164	168	172	176	179	183	187	190	194	198	201	205	209	213	217	220	224	228	232
+60	89	94	99	104	108	113	117	121	125	129	133	137	141	145	149	153	157	160	164	168	172	175	179	183	187	191	194	198	202	206	210	214	217	221	225	229	233
+58	88	93	98	102	107	111	116	120	124	128	132	136	140	144	148	152	156	160	164	168	172	175	179	183	187	191	195	199	202	206	210	214	218	222	226	230	234
+56	87	92	96	101	106	110	115	119	123	127	131	135	140	144	148	152	156	160	164	167	171	175	179	183	187	191	195	199	203	207	211	215	219	223	227	231	235
+54	85	90	95	100	104	109	113	118	122	126	131	135	139	143	147	151	155	159	163	167	171	175	179	183	187	191	195	199	203	207	211	215	219	224	228	232	236
+52	84	89	94	99	103	108	112	117	121	126	130	134	138	142	147	151	155	159	163	167	171	175	179	183	187	191	195	199	204	208	212	216	220	224	228	233	237
+50	83	88	93	98	102	107	112	116	120	125	129	133	138	142	146	150	154	159	163	167	171	175	179	183	187	192	196	200	204	208	212	216	221	225	229	233	238
+48	82	87	92	97	102	106	111	115	120	124	129	133	137	142	146	150	154	158	162	167	171	175	179	183	187	192	196	200	204	208	213	217	221	225	230	234	238
+46	81	86	91	96	101	105	110	115	119	124	128	132	137	141	145	150	154	158	162	167	171	175	179	183	188	192	196	200	205	209	213	217	222	226	230	235	239
+44	80	85	90	95	100	105	109	114	118	123	127	132	136	141	145	149	153	158	162	166	171	175	179	183	188	192	196	201	205	209	213	218	222	226	231	235	240
+42	80	85	90	94	99	104	109	113	118	122	127	131	136	140	144	149	153	158	162	166	171	175	179	183	188	192	196	201	205	209	214	218	223	227	231	236	240
+40	79	84	89	94	99	103	108	113	117	122	126	131	135	140	144	149	153	157	162	166	170	175	179	183	188	192	197	201	205	210	214	219	223	227	232	236	241
+38	78	83	88	93	98	103	107	112	117	121	126	130	135	139	144	148	153	157	161	166	170	175	179	184	188	192	197	201	206	210	214	219	223	228	232	237	242
+36	77	83	88	92	97	102	107	111	116	121	125	130	134	139	143	148	152	157	161	166	170	175	179	184	188	192	197	201	206	210	215	219	224	228	233	237	242
+34	77	82	87	92	97	101	106	111	116	120	125	129	134	139	143	148	152	157	161	166	170	175	179	184	188	193	197	202	206	211	215	220	224	229	233	238	243
+32	76	81	86	91	96	101	106	110	115	120	124	129	134	138	143	147	152	156	161	166	170	175	179	184	188	193	197	202	206	211	215	220	225	229	234	238	243
+30	76	81	86	91	96	100	105	110	115	119	124	129	133	138	142	147	152	156	161	165	170	175	179	184	188	193	197	202	207	211	216	220	225	229	234	239	243

*North latitudes positive, south latitudes negative

Table 1-A2--Geomagnetic longitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude*	Geographic east longitude in degrees																																				
	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360
+88	189	189	189	190	190	190	190	190	190	190	189	189	189	188	188	187	186	185	184	183	182	181	180	179	178	177	176	175	174	173	173	172	172	171	171	170	170
+86	196	197	198	199	199	200	200	200	201	200	200	200	199	198	197	196	194	193	190	188	186	183	181	178	175	173	170	168	166	165	163	162	161	160	160	160	159
+84	203	204	205	206	208	209	210	210	211	211	212	212	211	211	210	208	206	203	200	196	192	186	181	176	170	166	161	158	155	153	151	150	149	149	148	148	149
+82	208	210	211	213	215	216	218	219	221	222	223	224	224	224	224	223	222	219	216	210	203	193	182	171	161	153	146	142	139	137	136	136	136	136	137	138	139
+80	212	215	217	219	221	223	225	227	229	231	233	235	236	238	239	240	241	241	239	236	229	214	187	155	136	126	122	120	119	120	120	121	123	124	126	128	130
+78	216	219	221	224	226	229	232	234	237	240	242	245	248	250	253	256	259	263	266	272	277	290	338	60	79	87	92	96	99	103	106	109	111	114	117	119	122
+76	219	222	225	228	231	234	237	240	243	246	250	253	257	260	264	268	275	281	288	297	311	329	355	21	43	58	69	76	83	89	93	98	101	105	109	112	116
+74	222	225	228	231	235	238	241	245	248	252	256	260	264	267	274	280	285	293	302	312	325	340	357	14	30	43	55	64	71	78	84	89	94	98	102	106	110
+72	224	227	231	234	238	241	245	249	253	257	261	265	270	275	281	287	294	302	310	320	331	344	357	11	24	36	46	55	63	70	76	82	88	93	97	102	106
+70	226	230	233	237	241	244	248	252	256	261	265	270	275	280	286	293	300	307	316	325	335	346	358	9	20	31	41	49	57	65	71	77	83	88	93	98	102
+68	228	232	235	239	243	247	251	255	260	264	269	274	279	285	291	297	304	311	320	328	338	348	358	8	18	28	37	45	53	60	67	73	79	84	89	94	99
+66	229	233	237	241	245	249	253	258	262	267	272	277	282	288	294	300	307	315	323	331	340	349	358	8	17	26	34	42	50	57	63	70	75	81	86	91	96
+64	231	235	239	243	247	251	256	260	265	270	275	280	285	291	297	303	310	317	325	333	341	350	358	7	16	24	32	40	47	54	61	67	73	78	84	89	93
+62	232	236	240	244	249	253	257	262	267	272	277	282	287	293	299	305	312	319	326	334	342	350	358	7	15	23	31	38	45	52	58	65	70	76	81	86	91
+60	233	237	242	246	250	255	259	264	268	273	279	284	289	295	301	307	314	321	328	335	343	351	358	6	14	22	29	36	43	50	56	63	68	74	79	85	89
+58	234	239	243	247	251	256	260	265	270	275	280	285	291	297	303	309	315	322	329	336	343	351	358	6	14	21	28	35	42	49	55	61	67	72	78	83	88
+56	235	240	244	248	253	257	262	267	272	276	282	287	292	298	304	310	317	323	330	337	344	351	359	6	13	20	27	34	41	47	53	59	65	71	76	81	87
+54	236	240	245	249	254	258	263	268	273	278	283	288	294	300	305	311	318	324	331	338	345	352	359	6	13	20	27	33	40	46	52	58	64	70	75	80	85
+52	237	241	246	250	254	259	264	269	274	279	284	289	295	301	306	312	319	325	331	338	345	352	359	6	12	19	26	32	39	45	51	57	63	68	74	79	84
+50	238	242	247	251	256	260	265	270	275	280	285	291	296	302	307	313	319	326	332	339	345	352	359	5	12	19	25	32	38	44	50	56	62	67	73	78	83
+48	238	243	247	252	257	261	266	271	276	281	286	292	297	303	308	314	320	326	333	339	346	352	359	5	12	18	25	31	37	43	49	55	61	66	72	77	82
+46	239	244	248	253	258	262	267	272	277	282	287	292	298	303	309	315	321	327	333	339	346	352	359	5	11	18	24	31	37	43	49	54	60	65	71	76	81
+44	240	244	249	254	258	263	268	273	278	283	288	293	299	304	310	316	322	328	334	340	346	352	359	5	11	18	24	30	36	42	48	54	59	65	70	75	80
+42	240	245	250	254	259	264	269	273	278	284	289	294	299	305	311	316	322	328	334	340	346	353	359	5	11	17	24	30	36	41	47	53	58	64	69	74	80
+40	241	245	250	255	260	264	269	274	279	284	289	295	300	306	311	317	323	328	334	340	347	353	359	5	11	17	23	29	35	41	47	52	58	63	68	74	79
+38	242	246	251	255	260	265	270	275	280	285	290	295	301	306	312	317	323	329	335	341	347	353	359	5	11	17	23	29	35	40	46	52	57	63	68	73	78
+36	242	246	251	256	261	266	271	275	280	286	291	296	301	307	312	318	323	329	335	341	347	353	359	5	11	17	23	28	34	40	46	51	57	62	67	72	77
+34	243	247	252	257	261	266	271	276	281	286	291	297	302	307	313	318	324	330	335	341	347	353	359	5	11	16	22	28	34	40	45	51	56	61	67	72	77
+32	243	248	252	257	262	267	272	277	282	287	292	297	302	308	313	319	324	330	336	341	347	353	359	5	11	16	22	28	33	39	45	50	55	61	66	71	76
+30	243	248	253	258	263	267	272	277	282	287	292	298	303	308	314	319	325	330	336	342	347	353	359	5	10	16	22	28	33	39	44	50	55	60	66	71	76

*North latitudes positive, south latitudes negative

Table 1-A2--Geomagnetic longitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude *	Geographic east longitude in degrees																																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
+28	75	80	85	90	95	100	105	109	114	119	124	128	133	138	142	147	151	156	161	165	170	174	179	184	188	193	198	202	207	211	216	221	225	230	235	239	244
+26	75	80	85	90	95	99	104	109	114	118	123	128	133	137	142	147	151	156	161	165	170	174	179	184	188	193	198	202	207	212	216	221	226	230	235	240	244
+24	74	79	84	89	94	99	104	109	113	118	123	128	132	137	142	146	151	156	160	165	170	174	179	184	188	193	198	202	207	212	217	221	226	231	235	240	245
+22	74	79	84	89	94	98	103	108	113	118	122	127	132	137	141	146	151	155	160	165	170	174	179	184	188	193	198	203	207	212	217	221	226	231	236	240	245
+20	73	78	83	88	93	98	103	108	112	117	122	127	132	136	141	146	151	155	160	165	170	174	179	184	189	193	198	203	208	212	217	222	227	231	236	241	246
+18	73	78	83	88	93	98	102	107	112	117	122	126	131	136	141	146	150	155	160	165	169	174	179	184	189	193	198	203	208	213	217	222	227	232	236	241	246
+16	72	77	82	87	92	97	102	107	112	117	121	126	131	136	141	145	150	155	160	165	169	174	179	184	189	194	198	203	208	213	218	222	227	232	237	242	246
+14	72	77	82	87	92	97	102	106	111	116	121	126	131	135	140	145	150	155	160	164	169	174	179	184	189	194	198	203	208	213	218	223	227	232	237	242	247
+12	72	77	82	87	91	96	101	106	111	116	121	125	130	135	140	145	150	155	159	164	169	174	179	184	189	194	199	203	208	213	218	223	228	233	237	242	247
+10	71	76	81	86	91	96	101	106	111	115	120	125	130	135	140	145	150	154	159	164	169	174	179	184	189	194	199	204	209	213	218	223	228	233	238	243	248
+ 8	71	76	81	86	91	96	100	105	110	115	120	125	130	135	139	144	149	154	159	164	169	174	179	184	189	194	199	204	209	214	219	223	228	233	238	243	248
+ 6	71	75	80	85	90	95	100	105	110	115	120	124	129	134	139	144	149	154	159	164	169	174	179	184	189	194	199	204	209	214	219	224	229	234	238	243	248
+ 4	70	75	80	85	90	95	100	105	109	114	119	124	129	134	139	144	149	154	159	164	169	174	179	184	189	194	199	204	209	214	219	224	229	234	239	244	249
+ 2	70	75	80	85	89	94	99	104	109	114	119	124	129	134	139	144	149	154	159	164	169	174	179	184	189	194	199	204	209	214	219	224	229	234	239	244	249
0	69	74	79	84	89	94	99	104	109	114	119	123	128	133	138	143	148	154	159	164	169	174	179	184	189	194	199	204	210	215	220	225	230	235	240	244	249
- 2	69	74	79	84	89	93	98	103	108	113	118	123	128	133	138	143	148	153	158	164	169	174	179	184	189	194	199	205	210	215	220	225	230	235	240	245	250
- 4	69	74	78	83	88	93	98	103	108	113	118	123	128	133	138	143	148	153	158	163	169	174	179	184	189	194	200	205	210	215	220	225	230	235	240	245	250
- 6	68	73	78	83	88	93	98	103	107	112	117	122	128	133	138	143	148	153	158	163	169	174	179	184	189	195	200	205	210	215	220	225	230	236	241	246	251
- 8	68	73	78	83	87	92	97	102	107	112	117	122	127	132	137	142	148	153	158	163	168	174	179	184	189	195	200	205	210	215	221	226	231	236	241	246	251
-10	68	72	77	82	87	92	97	102	107	112	117	122	127	132	137	142	147	153	158	163	168	174	179	184	190	195	200	205	211	216	221	226	231	236	241	246	251
-12	67	72	77	82	87	91	96	101	106	111	116	121	126	132	137	142	147	152	158	163	168	174	179	184	190	195	200	205	211	216	221	226	231	237	242	247	252
-14	67	72	76	81	86	91	96	101	106	111	116	121	126	131	136	142	147	152	157	163	168	174	179	184	190	195	200	206	211	216	221	227	232	237	242	247	252
-16	66	71	76	81	86	91	96	101	105	110	116	121	126	131	136	141	147	152	157	163	168	173	179	184	190	195	201	206	211	217	222	227	232	237	242	247	252
-18	66	71	76	80	85	90	95	100	105	110	115	120	125	131	136	141	146	152	157	163	168	173	179	184	190	195	201	206	211	217	222	227	232	238	243	248	253
-20	66	70	75	80	85	90	95	100	105	110	115	120	125	130	135	141	146	152	157	162	168	173	179	184	190	195	201	206	212	217	222	228	233	238	243	248	253
-22	65	70	75	80	84	89	94	99	104	109	114	119	125	130	135	140	146	151	157	162	168	173	179	184	190	196	201	207	212	217	223	228	233	239	244	249	254
-24	65	70	74	79	84	89	94	99	104	109	114	119	124	129	135	140	146	151	156	162	168	173	179	184	190	196	201	207	212	218	223	228	234	239	244	249	254
-26	64	69	74	79	83	88	93	98	103	108	113	119	124	129	134	140	145	151	156	162	168	173	179	184	190	196	201	207	213	218	223	229	234	239	245	250	255
-28	64	69	73	78	83	88	93	98	103	108	113	118	123	129	134	139	145	151	156	162	167	173	179	184	190	196	202	207	213	218	224	229	235	240	245	250	255
-30	63	68	73	78	83	87	92	97	102	107	112	118	123	128	134	139	145	150	156	162	167	173	179	184	190	196	202	208	213	219	224	230	235	240	246	251	256

* North latitudes positive, south latitudes negative

Table 1-A2--Geomagnetic longitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude*	Geographic east longitude in degrees																																				
	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360
+28	244	249	253	258	263	268	273	278	283	288	293	298	303	309	314	319	325	331	336	342	347	353	359	5	10	16	22	27	33	38	44	49	55	60	65	70	75
+26	244	249	254	259	263	268	273	278	283	288	293	299	304	309	314	320	325	331	336	342	348	353	359	5	10	16	21	27	33	38	43	49	54	59	65	70	75
+24	245	250	254	259	264	269	274	279	284	289	294	299	304	309	315	320	326	331	336	342	348	353	359	4	10	16	21	27	32	38	43	48	54	59	64	69	74
+22	245	250	255	260	264	269	274	279	284	289	294	299	305	310	315	320	326	331	337	342	348	353	359	4	10	16	21	27	32	37	43	48	53	59	64	69	74
+20	246	250	255	260	265	270	275	280	285	290	295	300	305	310	315	321	326	332	337	342	348	353	359	4	10	15	21	26	32	37	42	48	53	58	63	68	73
+18	246	251	256	260	265	270	275	280	285	290	295	300	305	311	316	321	326	332	337	343	348	353	359	4	10	15	21	26	31	37	42	47	53	58	63	68	73
+16	246	251	256	261	266	271	276	281	285	290	296	301	306	311	316	321	327	332	337	343	348	353	359	4	10	15	21	26	31	37	42	47	52	57	62	67	72
+14	247	252	256	261	266	271	276	281	286	291	296	301	306	311	316	322	327	332	337	343	348	354	359	4	10	15	20	26	31	36	41	47	52	57	62	67	72
+12	247	252	257	262	267	271	276	281	286	291	296	301	306	312	317	322	327	332	338	343	348	354	359	4	10	15	20	25	31	36	41	46	51	57	62	67	72
+10	248	252	257	262	267	272	277	282	287	292	297	302	307	312	317	322	327	333	338	343	348	354	359	4	10	15	20	25	31	36	41	46	51	56	61	66	71
+ 8	248	253	258	263	267	272	277	282	287	292	297	302	307	312	317	322	328	333	338	343	348	354	359	4	9	15	20	25	30	35	41	46	51	56	61	66	71
+ 6	248	253	258	263	268	273	278	283	287	292	297	302	308	313	318	323	328	333	338	343	349	354	359	4	9	15	20	25	30	35	40	45	50	56	61	66	71
+ 4	249	254	258	263	268	273	278	283	288	293	298	303	308	313	318	323	328	333	338	343	349	354	359	4	9	14	20	25	30	35	40	45	50	55	60	65	70
+ 2	249	254	259	264	269	273	278	283	288	293	298	303	308	313	318	323	328	333	338	344	349	354	359	4	9	14	19	25	30	35	40	45	50	55	60	65	70
0	249	254	259	264	269	274	279	284	289	294	299	303	308	313	318	323	328	334	339	344	349	354	359	4	9	14	19	24	30	35	40	45	50	55	60	64	69
- 2	250	255	260	265	269	274	279	284	289	294	299	304	309	314	319	324	329	334	339	344	349	354	359	4	9	14	19	24	29	34	39	44	49	54	59	64	69
- 4	250	255	260	265	270	275	280	285	289	294	299	304	309	314	319	324	329	334	339	344	349	354	359	4	9	14	19	24	29	34	39	44	49	54	59	64	69
- 6	251	255	260	265	270	275	280	285	290	295	300	304	309	314	319	324	329	334	339	344	349	354	359	4	9	14	19	24	29	34	39	44	49	54	58	63	68
- 8	251	256	261	266	271	276	280	285	290	295	300	305	310	315	319	324	329	334	339	344	349	354	359	4	9	14	19	24	29	34	39	43	48	53	58	63	68
-10	251	256	261	266	271	276	281	286	291	295	300	305	310	315	320	325	330	334	339	344	349	354	359	4	9	14	19	24	29	33	38	43	48	53	58	63	68
-12	252	257	262	267	271	276	281	286	291	296	301	305	310	315	320	325	330	335	339	344	349	354	359	4	9	14	19	23	28	33	38	43	48	53	57	62	67
-14	252	257	262	267	272	277	282	286	291	296	301	306	311	315	320	325	330	335	340	344	349	354	359	4	9	14	18	23	28	33	38	43	47	52	57	62	67
-16	252	257	262	267	272	277	282	287	292	297	301	306	311	316	321	325	330	335	340	345	349	354	359	4	9	14	18	23	28	33	38	42	47	52	57	62	66
-18	253	258	263	268	273	278	282	287	292	297	302	306	311	316	321	326	330	335	340	345	349	354	359	4	9	13	18	23	28	33	37	42	47	52	56	61	66
-20	253	258	263	268	273	278	283	288	292	297	302	307	312	316	321	326	331	335	340	345	350	354	359	4	9	13	18	23	28	32	37	42	47	51	56	61	66
-22	254	259	264	269	274	278	283	288	293	298	302	307	312	317	321	326	331	335	340	345	350	354	359	4	8	13	18	23	27	32	37	41	46	51	56	60	65
-24	254	259	264	269	274	279	284	289	293	298	303	308	312	317	322	326	331	336	340	345	350	354	359	4	8	13	18	22	27	32	37	41	46	51	55	60	65
-26	255	260	265	270	275	279	284	289	294	298	303	308	313	317	322	327	331	336	341	345	350	354	359	4	8	13	18	22	27	32	36	41	45	50	55	60	64
-28	255	260	265	270	275	280	285	289	294	299	304	308	313	318	322	327	331	336	341	345	350	354	359	4	8	13	18	22	27	31	36	41	45	50	55	59	64
-30	256	261	266	271	276	280	285	290	295	299	304	309	313	318	322	327	332	336	341	345	350	355	359	4	8	13	17	22	27	31	36	40	45	49	54	59	63

* North latitudes positive, south latitudes negative

Table 1-A2--Geomagnetic longitudes of points on the Earth in various geographic latitudes and longitudes--Continued

Geographic latitude*	Geographic east longitude in degrees																																			
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
-32	63	68	72	77	82	87	92	97	102	107	112	117	122	128	133	139	144	150	156	161	167	173	179	184	191	196	202	208	213	219	225	230	235	241	246	251	256
-34	63	67	72	77	81	86	91	96	101	106	111	117	122	127	133	138	144	150	155	161	167	173	179	184	191	196	202	208	214	220	225	231	236	241	247	252	257
-36	62	66	71	76	81	86	91	95	100	106	111	116	121	127	132	138	143	149	155	161	167	173	179	184	191	197	203	208	214	220	226	231	237	242	247	252	257
-38	62	66	71	75	80	85	90	95	100	105	110	115	121	126	132	137	143	149	155	161	167	173	179	184	191	197	203	209	215	220	226	232	237	243	248	253	258
-40	61	65	70	75	80	84	89	94	99	104	109	115	120	126	131	137	143	148	154	160	167	173	179	184	191	197	203	209	215	221	227	232	238	243	248	254	259
-42	60	65	70	74	79	84	89	93	98	104	109	114	119	125	131	136	142	148	154	160	166	173	179	184	191	197	204	210	216	221	227	233	238	244	249	254	260
-44	60	64	69	74	78	83	88	93	98	103	108	113	119	124	130	136	142	148	154	160	166	172	179	184	191	198	204	210	216	222	228	234	239	245	250	255	260
-46	59	64	68	73	78	82	87	92	97	102	107	112	118	123	129	135	141	147	153	159	166	172	179	184	191	198	204	211	217	223	229	234	240	245	251	256	261
-48	58	63	67	72	77	81	86	91	96	101	106	112	117	123	128	134	140	146	153	159	166	172	179	184	192	198	205	211	217	223	229	235	241	246	252	257	262
-50	58	62	67	71	76	80	85	90	95	100	105	111	116	122	127	133	139	146	153	159	165	172	179	184	192	199	205	212	218	224	230	236	242	247	253	258	263
-52	57	61	66	70	74	79	84	89	94	99	104	109	115	121	126	132	139	145	151	158	165	172	179	186	192	199	206	212	219	225	231	237	243	248	254	259	264
-54	56	60	65	69	74	78	83	88	93	98	103	108	114	120	125	131	138	144	151	158	165	172	179	186	193	200	207	213	220	226	232	238	244	250	255	260	265
-56	55	60	64	68	73	77	82	87	92	96	102	107	112	118	124	130	137	143	150	157	164	171	179	186	193	200	207	214	221	227	233	239	245	251	256	261	267
-58	54	59	63	67	71	76	80	85	90	95	100	105	111	117	123	129	135	142	149	156	163	171	178	186	194	201	208	215	222	229	235	241	247	252	258	263	268
-60	53	57	62	66	70	75	79	84	88	93	99	104	109	115	121	127	134	141	148	155	163	171	178	186	194	202	209	216	223	230	236	243	248	254	259	265	269
-62	52	56	60	64	69	73	77	82	87	92	97	102	107	113	119	125	132	139	146	154	162	170	178	187	195	203	211	218	225	232	238	245	250	256	261	266	271
-64	51	55	59	63	67	71	76	80	85	90	95	100	105	111	117	123	130	137	145	153	161	170	178	187	196	204	212	220	227	234	241	247	253	258	263	269	273
-66	49	53	57	61	65	69	73	78	82	87	92	97	102	108	114	120	127	135	143	151	160	169	178	188	197	206	214	222	230	237	243	250	255	261	266	271	276
-68	48	52	55	59	63	67	71	75	80	84	89	94	99	105	111	117	124	131	140	148	158	168	178	188	198	208	217	225	233	240	247	253	259	264	270	274	279
-70	46	50	53	57	61	64	68	72	76	81	85	90	95	100	106	113	120	127	136	145	155	166	178	189	200	211	221	229	237	245	251	257	263	268	273	278	282
-72	44	47	51	54	58	61	65	69	73	77	81	85	90	95	101	107	114	122	130	140	151	164	177	191	204	216	226	235	243	250	256	262	268	273	277	282	286
-74	42	45	48	51	55	58	61	65	68	72	76	80	84	87	94	100	105	113	122	132	145	160	177	194	210	223	235	244	251	258	264	269	274	278	282	286	290
-76	39	42	45	48	51	54	57	60	63	66	70	73	77	80	84	88	95	101	108	117	131	150	175	201	223	238	249	256	263	269	273	278	281	285	289	292	296
-78	36	39	41	44	46	49	52	54	57	60	62	65	68	70	73	76	79	83	87	92	97	110	158	240	259	267	268	276	279	283	285	289	291	294	296	299	302
-80	32	35	37	39	41	43	45	47	49	51	53	55	56	58	59	60	61	61	59	56	49	34	7	335	316	306	302	300	299	300	300	301	303	304	306	308	310
-82	28	30	31	33	35	36	38	39	41	42	43	44	44	44	44	43	42	39	36	30	23	13	2	351	341	333	326	322	319	317	316	316	316	316	317	318	319
-84	23	24	25	26	28	29	30	30	31	31	32	32	31	31	30	28	26	23	20	16	12	6	1	356	350	346	341	338	335	333	331	330	329	329	328	328	329
-86	16	17	18	19	19	20	20	20	21	20	20	20	19	18	17	16	14	13	10	8	6	3	1	358	355	353	350	348	346	345	343	342	341	340	340	340	339
-88	9	9	9	10	10	10	10	10	10	10	9	9	9	8	8	7	6	5	4	3	2	1	0	359	358	357	356	355	354	353	353	352	352	351	351	350	350

* North latitudes positive, south latitudes negative

Table 1-A2--Geomagnetic longitudes of points on the Earth in various geographic latitudes and longitudes--Concluded

Geographic latitude*	Geographic east longitude in degrees																																				
	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360
-32	256	261	266	271	276	281	286	290	295	300	304	309	314	318	323	327	332	336	341	346	350	355	359	4	8	13	17	22	26	31	35	40	45	49	54	58	63
-34	257	262	267	272	277	281	286	291	296	300	305	309	314	319	323	328	332	337	341	346	350	355	359	4	8	13	17	22	26	31	35	40	44	49	53	58	63
-36	257	263	268	272	277	282	287	291	296	301	305	310	314	319	323	328	332	337	341	346	350	355	359	4	8	12	17	21	26	30	35	39	44	48	53	57	62
-38	258	263	268	273	278	283	287	292	297	301	306	310	315	319	324	328	333	337	341	346	350	355	359	4	8	12	17	21	26	30	34	39	43	48	52	57	62
-40	259	264	269	274	279	283	288	293	297	302	306	311	315	320	324	329	333	337	342	346	350	355	359	3	8	12	17	21	25	30	34	39	43	47	52	56	61
-42	260	265	270	274	279	284	289	293	298	302	307	311	316	320	324	329	333	338	342	346	351	355	359	3	8	12	16	21	25	29	34	38	43	47	51	56	60
-44	260	265	270	275	280	285	289	294	298	303	307	312	316	321	325	329	333	338	342	346	351	355	359	3	8	12	16	21	25	29	33	38	42	46	51	55	60
-46	261	266	271	276	281	285	290	295	299	304	308	312	317	321	325	330	334	338	342	347	351	355	359	3	8	12	16	20	25	29	33	37	42	46	50	55	59
-48	262	267	272	277	282	286	291	295	300	304	309	313	317	322	326	330	334	338	342	347	351	355	359	3	7	12	16	20	24	28	33	37	41	45	50	54	58
-50	263	268	273	278	282	287	292	296	300	305	309	313	318	322	326	330	334	339	343	347	351	355	359	3	7	12	16	20	24	28	32	36	41	46	49	53	58
-52	264	269	274	279	283	288	292	297	301	306	310	314	318	322	327	331	335	339	343	347	351	355	359	3	7	11	15	19	24	28	32	36	40	44	48	53	57
-54	265	270	275	280	284	289	293	298	302	306	311	315	319	323	327	331	335	339	343	347	351	355	359	3	7	11	15	19	23	27	31	35	39	44	48	52	56
-56	267	272	276	281	286	290	295	299	303	307	311	315	320	324	328	332	336	340	344	347	351	355	359	3	7	11	15	19	23	27	31	35	39	43	47	51	55
-58	268	273	278	282	287	291	296	300	304	308	312	316	320	324	328	332	336	340	344	348	352	355	359	3	7	11	15	19	22	26	30	34	38	42	46	50	54
-60	269	274	279	284	288	293	297	301	305	309	313	317	321	325	329	333	337	340	344	348	352	355	359	3	7	11	14	18	22	26	30	34	37	41	45	49	53
-62	271	276	281	285	290	294	298	302	306	310	314	318	322	326	330	333	337	341	344	348	352	356	359	3	7	10	14	18	21	25	29	33	37	40	44	48	52
-64	273	278	283	287	291	296	300	304	308	311	315	319	323	327	330	334	338	341	345	348	352	356	359	3	6	10	14	17	21	25	28	32	36	39	43	47	51
-66	276	280	285	289	293	297	301	305	309	313	316	320	324	327	331	335	338	342	345	349	352	356	359	3	6	10	13	17	20	24	27	31	35	38	42	46	49
-68	279	283	287	291	296	299	303	307	311	314	318	321	325	328	332	335	339	342	346	349	353	356	359	3	6	10	13	16	20	23	27	30	34	37	41	44	48
-70	282	286	290	294	298	302	305	309	313	316	319	323	326	330	333	336	340	343	346	350	353	356	359	3	6	9	12	16	19	22	26	29	32	36	39	43	46
-72	286	290	293	297	301	304	308	311	315	318	321	324	328	331	334	337	340	344	347	350	353	356	359	3	6	9	12	15	18	21	25	28	31	34	37	41	44
-74	290	294	297	301	304	307	311	314	317	320	323	326	329	332	335	338	342	344	347	350	353	356	359	2	5	8	11	14	17	20	23	26	29	33	36	39	42
-76	296	299	302	305	308	311	314	317	320	323	326	328	331	334	337	340	343	345	348	351	354	357	359	2	5	8	11	14	16	19	22	25	28	31	33	36	39
-78	302	305	307	310	313	315	318	320	323	326	328	331	333	336	339	341	344	346	349	352	354	357	359	2	5	7	10	13	15	18	20	23	26	28	31	33	36
-80	310	312	314	316	318	320	322	325	327	329	331	334	336	338	341	343	345	348	350	352	355	357	360	2	4	7	9	11	14	16	18	21	23	25	28	30	32
-82	319	320	321	323	324	326	328	330	331	333	335	337	339	341	343	345	347	349	351	353	355	357	360	2	4	6	8	10	12	14	16	18	20	22	24	26	28
-84	329	330	330	331	332	333	334	335	337	338	340	341	343	344	346	348	349	351	353	354	356	358	360	1	3	5	7	8	10	12	13	15	17	18	20	21	23
-86	339	340	340	340	341	341	342	343	343	344	345	346	347	348	350	351	352	353	355	356	357	358	360	1	2	4	5	6	7	9	10	11	12	13	14	15	16
-88	350	350	350	350	350	350	350	351	351	351	352	352	353	354	354	355	355	356	357	358	358	359	360	1	1	2	3	4	4	5	6	6	7	7	8	8	9

* North latitudes positive, south latitudes negative

Table 1-B--Dates in fractions of a calendar year, reckoned from $0^h.0$ of the day named

Day of		Deci-mal	Corr. leap-year	Day of		Deci-mal	Corr. leap-year	Day of		Deci-mal	Corr. leap-year
year	month			year	month			year	month		
1	Jan 1	.000	.000	121	May 1	.329	+.001	246	Sep 3	.671	+.001
6	6	.014	.000	126	6	.342	+.002	251	8	.685	+.001
11	11	.027	.000	131	11	.356	+.002	256	13	.699	+.001
16	16	.041	.000	136	16	.370	+.001	261	18	.712	+.001
21	21	.055	.000	141	21	.384	+.001	266	23	.726	+.001
26	26	.068	.000	146	26	.397	+.002	271	28	.740	.000
31	31	.082	.000	151	31	.411	+.001				
36	Feb 5	.096	.000	156	Jun 5	.425	+.001	276	Oct 3	.754	+.001
41	10	.110	.000	161	10	.438	+.002	281	8	.767	+.001
46	15	.123	.000	166	15	.452	+.001	286	13	.781	+.001
51	20	.137	-.001	171	20	.466	+.001	291	18	.794	+.001
56	25	.151	-.001	176	25	.480	+.001	296	23	.808	+.001
				181	30	.493	+.001	301	28	.822	+.001
61	Mar 2	.164	+.003	186	Jul 5	.507	+.001	306	Nov 2	.836	.000
66	7	.178	+.002	191	10	.521	+.001	311	7	.849	+.001
71	12	.192	+.002	196	15	.534	+.001	316	12	.863	+.001
76	17	.206	+.002	201	20	.548	+.001	321	17	.877	.000
81	22	.219	+.002	206	25	.562	+.001	326	22	.890	+.001
86	27	.233	+.002	211	30	.575	+.001	331	27	.904	.000
91	Apr 1	.247	+.001	216	Aug 4	.589	+.001	336	Dec 2	.918	.000
96	6	.260	+.002	221	9	.603	+.001	341	7	.932	.000
101	11	.274	+.002	226	14	.616	+.001	346	12	.945	.000
106	16	.288	+.001	231	19	.630	+.001	351	17	.959	.000
111	21	.301	+.002	236	24	.644	+.001	356	22	.973	.000
116	26	.315	+.002	241	29	.658	.000	361	27	.986	.000
								366	32	1.000	.000

One day = .002740 year; one hour = .00011 year; one day in leap-year = .002732 year

Decimals of a day for each hour	
h	d
0	.000
1	.042
2	.083
3	.125
4	.167
5	.208
6	.250
7	.292
8	.333
9	.375
10	.417
11	.458
12	.500
13	.542
14	.583
15	.625
16	.667
17	.708
18	.750
19	.792
20	.833
21	.875
22	.917
23	.958
24	1.000

Month	Begin-ning	Middle	Leap-year	
			Begin-ning	Middle
Jan	.000	.042	.000	.042
Feb	.085	.123	.085	.123
Mar	.162	.204	.164	.206
Apr	.247	.288	.249	.290
May	.329	.371	.331	.373
Jun	.414	.455	.415	.456
Jul	.496	.538	.497	.538
Aug	.581	.623	.582	.624
Sep	.666	.707	.667	.708
Oct	.748	.790	.749	.791
Nov	.833	.874	.833	.875
Dec	.915	.958	.915	.957

Corrections to midday

No. of days	Correc-tion
0.5	.001
1.5	.004
2.5	.007
3.5	.010
4.5	.012

Table 1-C--Estimated symmetrical part of annual variation (AV) in geomagnetic north component (X'), appropriate to geomagnetic equator (Φ = 0), 1905-1942; also multiplicative latitude-factors for obtaining symmetrical part in any latitude from equatorial value

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1905	- 0.5	- 7.1	- 4.4	- 0.4	+ 9.3	+ 8.4	+ 7.8	- 3.8	-10.2	+ 2.3	-11.0	+ 8.4
1906	+10.8	- 8.6	- 5.0	- 3.0	- 3.2	+ 7.0	+ 3.5	- 1.2	- 5.2	+ 0.7	+ 7.4	- 2.2
1907	+ 2.8	-29.4	- 3.4	+ 5.6	- 5.0	- 1.1	- 1.1	+ 6.1	- 5.0	+ 2.8	+ 8.3	+18.3
1908	+11.1	+ 8.3	- 6.1	- 0.6	- 0.6	+ 9.4	+11.1	+ 0.6	-27.2	- 9.4	- 7.2	+ 8.9
1909	+ 5.0	+ 4.4	- 2.2	+ 8.9	- 7.2	+12.8	+15.0	+10.0	- 9.4	-35.5	- 1.1	+ 1.1
1910	+ 2.3	+ 3.5	- 6.4	-10.8	- 4.8	+ 6.5	+ 9.8	- 4.4	- 1.2	-10.3	+ 7.0	+10.4
1911	+ 7.2	- 3.9	- 1.6	- 3.4	- 3.9	+ 1.1	+ 0.6	- 1.1	- 1.1	- 1.1	+ 5.6	+ 0.6
1912	- 3.9	+ 1.1	0.0	- 1.1	- 3.4	- 1.6	- 1.1	- 6.6	- 5.6	+ 4.4	+ 5.0	+10.0
1913	+ 9.4	+ 7.8	+ 4.4	- 2.2	- 0.6	- 6.1	- 5.6	+ 1.1	- 5.0	- 6.1	+ 2.2	+ 4.4
1914	+ 5.6	+ 3.0	- 2.0	- 7.7	+ 5.3	+ 4.1	+ 2.2	- 2.6	- 3.6	- 5.3	- 3.7	+ 4.4
1915	+ 9.3	+ 7.3	+ 1.8	+ 2.6	+ 5.8	-11.1	- 1.3	+ 0.4	- 1.1	- 8.2	- 9.5	+ 4.5
1916	+ 7.8	+16.6	-15.0	- 1.6	- 1.6	+ 8.9	+ 2.2	- 2.8	- 9.4	- 7.8	- 1.6	+ 3.4
1917	-13.9	0.0	+ 6.1	0.0	+ 0.6	+ 6.1	+ 2.2	-25.6	+ 6.1	+ 4.4	+13.3	+ 5.0
1918	+17.2	+ 8.3	+ 3.9	- 4.4	- 1.6	+ 5.0	+ 6.6	- 3.9	- 9.4	- 9.4	- 0.6	-10.0
1919	+ 4.1	+ 3.0	-10.4	- 2.3	-11.4	+14.0	+13.2	- 9.9	-15.0	-13.2	+15.3	+11.8
1920	+16.2	+10.4	-18.6	-15.6	+ 3.2	+11.6	+ 8.9	+ 1.8	-14.2	- 8.2	+ 1.4	+ 7.4
1921	+16.6	+24.8	+12.1	+ 3.9	-31.3	- 8.2	0.0	- 3.0	- 6.6	- 9.0	- 1.3	+ 2.0
1922	+ 5.2	+ 1.6	- 8.9	- 8.8	- 4.0	+ 2.5	- 0.3	- 3.2	- 6.6	- 0.4	+10.3	+14.5
1923	+ 9.4	+ 0.2	- 5.6	- 0.6	- 2.6	- 0.2	- 0.4	+ 0.8	- 1.2	-11.0	+ 3.2	+ 5.2
1924	- 1.5	+ 1.5	+ 3.0	+ 6.6	- 1.5	- 5.9	- 2.2	+ 2.2	- 8.2	- 1.5	+ 0.8	+13.3
1925	+ 8.9	+ 8.2	+ 8.9	+ 3.7	+ 6.6	- 3.0	+ 1.5	- 3.0	-19.2	-18.5	- 3.0	+ 3.7
1926	- 0.8	-10.4	-14.8	-12.6	0.0	+10.4	+12.6	+ 5.9	- 8.9	-10.4	+14.8	+10.7
1927	+ 5.2	+ 1.5	-11.8	- 6.6	+ 0.8	+17.8	+ 3.7	- 6.6	- 5.9	-19.2	+ 9.6	+11.1
1928	+19.2	+16.3	+11.1	+12.6	+ 3.0	+ 0.8	-26.6	-13.3	-11.1	-17.8	- 1.5	+14.0
1929	+ 4.4	- 4.4	-20.7	+ 3.0	+ 6.6	+13.3	+ 2.2	+ 6.6	0.0	- 5.2	- 3.0	- 5.2
1930	+10.4	+ 5.9	+ 2.2	- 6.6	- 2.2	- 3.7	+ 0.8	- 3.0	-10.4	-12.6	+ 0.8	+17.0
1931	+ 8.9	+ 5.2	+ 2.2	+ 9.6	+ 7.4	+ 8.2	+ 5.2	- 3.0	-12.6	-17.0	-11.1	- 5.2
1932	+ 7.4	- 2.2	- 9.6	-13.3	- 4.4	+ 7.4	+11.8	+ 3.0	- 4.4	- 2.2	+ 6.6	+ 4.4
1933	+ 3.7	+ 2.2	- 1.5	- 3.7	- 3.0	+ 6.6	+11.8	- 3.7	-11.1	- 3.0	+ 2.2	+ 5.9
1934	+ 5.9	0.0	- 6.6	+ 1.5	+ 3.7	+ 7.4	+ 8.9	- 8.2	-11.1	- 3.0	+ 4.4	+ 1.5
1935	- 0.8	- 2.2	- 5.2	0.0	+ 5.9	+ 5.9	+ 6.6	+ 8.9	- 9.6	-11.1	+ 0.8	+ 3.7
1936	- 3.0	-14.0	- 9.6	-17.0	0.0	+ 1.5	+ 1.5	+12.6	+10.4	+ 1.5	+ 2.2	+14.8
1937	+ 6.6	- 6.6	- 3.7	- 8.2	- 6.6	+ 6.6	+ 9.6	- 3.7	+ 2.2	-23.7	+ 6.6	+17.0
1938	-22.2	- 6.6	- 0.8	- 8.9	- 5.2	+21.4	+ 8.2	+ 8.2	- 2.2	- 9.6	+ 8.2	+ 8.2
1939	+28.8	+ 1.5	- 5.9	-21.4	-12.6	+ 8.2	+ 0.8	- 6.6	- 3.0	-18.5	+13.3	+17.0
1940	- 0.8	+ 8.2	-13.3	-18.5	+ 2.2	+ 3.7	+ 6.6	+ 5.2	- 2.2	- 3.7	- 3.0	+11.1
1941	+18.5	+11.1	-28.8	- 2.2	+12.6	+21.4	-15.6	- 0.8	-20.0	- 2.2	- 2.2	+13.3
1942	+ 3.7	+ 2.2	-16.3	-12.6	+10.4	+17.0	+ 8.2	+ 1.5	- 5.2	-11.1	- 2.2	+ 5.9

Φ °	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
+80	+1.25	+1.12	+0.96	+0.84	+0.73	+0.61	+0.49	+0.35	+0.20	+0.05	0.00
+70	+2.43	+2.26	+1.90	+1.45	+1.39	+1.37	+1.35	+1.33	+1.31	+1.29	+1.25
+60	+0.33	+0.49	+0.71	+0.94	+1.16	+1.41	+1.67	+2.04	+2.33	+2.47	+2.43
+50	+0.65	+0.63	+0.61	+0.58	+0.55	+0.50	+0.46	+0.42	+0.37	+0.34	+0.33
+40	+0.75	+0.74	+0.73	+0.73	+0.73	+0.72	+0.71	+0.70	+0.69	+0.67	+0.65
+30	+0.83	+0.82	+0.82	+0.81	+0.80	+0.79	+0.78	+0.77	+0.76	+0.76	+0.75
+20	+0.90	+0.89	+0.88	+0.88	+0.87	+0.86	+0.86	+0.85	+0.84	+0.84	+0.83
+10	+0.98	+0.97	+0.97	+0.96	+0.95	+0.94	+0.93	+0.92	+0.92	+0.91	+0.90
+ 0	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+0.99	+0.98	+0.98
- 0	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+0.99	+0.98	+0.98
-10	+0.98	+0.97	+0.97	+0.96	+0.95	+0.94	+0.93	+0.92	+0.92	+0.91	+0.90
-20	+0.90	+0.89	+0.88	+0.88	+0.87	+0.86	+0.86	+0.85	+0.84	+0.84	+0.83
-30	+0.83	+0.82	+0.82	+0.81	+0.80	+0.79	+0.78	+0.77	+0.76	+0.76	+0.75
-40	+0.75	+0.74	+0.73	+0.73	+0.73	+0.72	+0.71	+0.70	+0.69	+0.67	+0.65
-50	+0.65	+0.63	+0.61	+0.58	+0.55	+0.50	+0.46	+0.42	+0.37	+0.34	+0.33
-60	+0.33	+0.49	+0.71	+0.94	+1.16	+1.41	+1.67	+2.04	+2.33	+2.47	+2.43
-70	+2.43	+2.26	+1.90	+1.45	+1.39	+1.37	+1.35	+1.33	+1.31	+1.29	+1.25
-80	+1.25	+1.12	+0.96	+0.84	+0.73	+0.61	+0.49	+0.35	+0.20	+0.05	0.00

Table 1-D--Estimated sinusoidal part of annual variation (AV) in geomagnetic north component (X'), appropriate to geomagnetic latitude (Φ = 53°5), 1905-1942; also multiplicative latitude-factors for obtaining sinusoidal part in any latitude from given values

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1905	- 5.0	- 1.6	+ 2.3	+ 5.5	+ 7.3	+ 7.1	+ 5.0	+ 1.6	- 2.3	- 5.5	- 7.3	- 7.1
1906	- 6.2	- 3.2	+ 0.6	+ 4.2	+ 6.7	+ 7.4	+ 6.2	+ 3.2	- 0.6	- 4.2	- 6.7	- 7.4
1907	- 8.0	- 4.7	- 0.1	+ 4.6	+ 8.0	+ 9.3	+ 8.0	+ 4.7	+ 0.1	- 4.6	- 8.0	- 9.3
1908	- 5.1	- 2.6	+ 0.7	+ 3.7	+ 5.8	+ 6.3	+ 5.1	+ 2.6	- 0.7	- 3.7	- 5.8	- 6.3
1909	- 6.8	- 4.0	- 0.2	+ 3.6	+ 6.5	+ 7.7	+ 6.8	+ 4.0	+ 0.2	- 3.6	- 6.5	- 7.7
1910	- 5.6	- 2.4	+ 1.5	+ 5.0	+ 7.2	+ 7.4	+ 5.6	+ 2.4	- 1.5	- 5.0	- 7.2	- 7.4
1911	- 5.8	- 3.8	- 0.8	+ 2.4	+ 5.0	+ 6.2	+ 5.8	+ 3.8	+ 0.8	- 2.4	- 5.0	- 6.2
1912	- 4.3	- 1.7	+ 1.3	+ 4.0	+ 5.6	+ 5.7	+ 4.3	+ 1.7	- 1.3	- 4.0	- 5.6	- 5.7
1913	- 5.8	- 4.8	- 2.5	+ 0.4	+ 3.3	+ 5.2	+ 5.8	+ 4.8	+ 2.5	- 0.4	- 3.3	- 5.2
1914	- 1.9	- 0.4	+ 1.2	+ 2.5	+ 3.2	+ 2.9	+ 1.9	+ 0.4	- 1.2	- 2.5	- 3.2	- 2.9
1915	- 4.9	- 2.8	+ 0.1	+ 2.9	+ 5.0	+ 5.7	+ 4.9	+ 2.8	- 0.1	- 2.9	- 5.0	- 5.7
1916	- 5.2	- 3.1	- 0.3	+ 2.6	+ 4.9	+ 5.8	+ 5.2	+ 3.1	+ 0.3	- 2.6	- 4.9	- 5.8
1917	- 6.9	- 3.6	+ 0.7	+ 4.8	+ 7.6	+ 8.4	+ 6.9	+ 3.6	- 0.7	- 4.8	- 7.6	- 8.4
1918	- 7.4	- 4.6	- 0.5	+ 3.7	+ 6.9	+ 8.2	+ 7.4	+ 4.6	+ 0.5	- 3.7	- 6.9	- 8.2
1919	- 8.8	- 5.6	- 0.9	+ 4.0	+ 7.8	+ 9.6	+ 8.8	+ 5.6	+ 0.9	- 4.0	- 7.8	- 9.6
1920	- 5.8	- 3.8	- 0.8	+ 2.5	+ 5.0	+ 6.3	+ 5.8	+ 3.8	+ 0.8	- 2.5	- 5.0	- 6.3
1921	- 7.1	- 4.7	- 1.1	+ 2.9	+ 6.1	+ 7.6	+ 7.1	+ 4.7	+ 1.1	- 2.9	- 6.1	- 7.6
1922	- 6.1	- 3.0	+ 1.0	+ 4.6	+ 7.1	+ 7.6	+ 6.1	+ 3.0	- 1.0	- 4.6	- 7.1	- 7.6
1923	- 6.0	- 4.7	- 2.1	+ 1.0	+ 3.9	+ 5.7	+ 6.0	+ 4.7	+ 2.1	- 1.0	- 3.9	- 5.7
1924	- 5.5	- 4.4	- 2.1	+ 0.7	+ 3.4	+ 5.2	+ 5.5	+ 4.4	+ 2.1	- 0.7	- 3.4	- 5.2
1925	- 7.3	- 5.9	- 3.0	+ 0.8	+ 4.3	+ 6.7	+ 7.3	+ 5.9	+ 3.0	- 0.8	- 4.3	- 6.7
1926	- 6.9	- 5.2	- 2.0	+ 1.6	+ 4.9	+ 6.8	+ 6.9	+ 5.2	+ 2.0	- 1.6	- 4.9	- 6.8
1927	- 4.8	- 2.3	+ 0.8	+ 3.6	+ 5.5	+ 6.0	+ 4.8	+ 2.3	- 0.8	- 3.6	- 5.5	- 6.0
1928	- 5.2	- 2.6	+ 0.6	+ 3.7	+ 5.8	+ 6.3	+ 5.2	+ 2.6	- 0.6	- 3.7	- 5.8	- 6.3
1929	- 4.7	- 2.8	- 0.1	+ 2.6	+ 4.6	+ 5.4	+ 4.7	+ 2.8	+ 0.1	- 2.6	- 4.6	- 5.4
1930	- 4.8	- 2.8	0.0	+ 2.7	+ 4.7	+ 5.4	+ 4.8	+ 2.8	0.0	- 2.7	- 4.7	- 5.4
1931	- 4.2	- 2.5	- 0.2	+ 2.2	+ 4.0	+ 4.7	+ 4.2	+ 2.5	+ 0.2	- 2.2	- 4.0	- 4.7
1932	- 3.9	- 1.6	+ 1.1	+ 3.5	+ 5.0	+ 5.1	+ 3.9	+ 1.6	- 1.1	- 3.5	- 5.0	- 5.1
1933	- 4.3	- 3.2	- 1.3	+ 1.0	+ 3.0	+ 4.2	+ 4.3	+ 3.2	+ 1.3	- 1.0	- 3.0	- 4.2
1934	- 3.7	- 2.1	+ 0.1	+ 2.2	+ 3.8	+ 4.3	+ 3.7	+ 2.1	- 0.1	- 2.2	- 3.8	- 4.3
1935	- 5.2	- 3.6	- 1.0	+ 1.8	+ 4.2	+ 5.4	+ 5.2	+ 3.6	+ 1.0	- 1.8	- 4.2	- 5.4
1936	- 4.8	- 0.6	+ 3.8	+ 7.2	+ 8.6	+ 7.8	+ 4.8	+ 0.6	- 3.8	- 7.2	- 8.6	- 7.8
1937	- 6.1	- 4.0	- 0.9	+ 2.5	+ 5.2	+ 6.5	+ 6.1	+ 4.0	+ 0.9	- 2.5	- 5.2	- 6.5
1938	- 7.1	- 4.4	- 0.6	+ 3.4	+ 6.4	+ 7.8	+ 7.1	+ 4.4	+ 0.6	- 3.4	- 6.4	- 7.8
1939	- 5.7	- 3.2	+ 0.1	+ 3.4	+ 5.8	+ 6.6	+ 5.7	+ 3.2	- 0.1	- 3.4	- 5.8	- 6.6
1940	- 5.4	- 3.5	- 0.6	+ 2.5	+ 4.9	+ 6.0	+ 5.4	+ 3.5	+ 0.6	- 2.5	- 4.9	- 6.0
1941	- 4.0	- 2.2	+ 0.2	+ 2.5	+ 4.2	+ 4.7	+ 4.0	+ 2.2	- 0.2	- 2.5	- 4.2	- 4.7
1942	- 4.8	- 2.8	- 0.1	+ 2.6	+ 4.7	+ 5.5	+ 4.8	+ 2.8	+ 0.1	- 2.6	- 4.7	- 5.7

Φ °	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
+80	+4.07	+4.00	+3.93	+3.84	+3.74	+3.60	+3.44	+3.16	+2.63	+2.10	0.00
+70	+2.79	+3.16	+3.49	+3.67	+3.81	+3.91	+4.00	+4.07	+4.11	+4.11	+4.07
+60	+0.84	+0.84	+0.91	+1.04	+1.19	+1.46	+1.69	+1.89	+2.16	+2.46	+2.79
+50	+0.98	+0.99	+1.00	+1.00	+1.00	+0.98	+0.96	+0.94	+0.91	+0.88	+0.84
+40	+0.91	+0.92	+0.93	+0.94	+0.95	+0.95	+0.95	+0.96	+0.96	+0.97	+0.98
+30	+0.79	+0.80	+0.82	+0.83	+0.84	+0.86	+0.87	+0.88	+0.89	+0.90	+0.91
+20	+0.58	+0.60	+0.61	+0.64	+0.67	+0.68	+0.70	+0.72	+0.75	+0.77	+0.79
+10	+0.30	+0.32	+0.35	+0.38	+0.42	+0.44	+0.47	+0.50	+0.53	+0.56	+0.58
+ 0	0.00	+0.04	+0.07	+0.10	+0.12	+0.15	+0.18	+0.22	+0.25	+0.28	+0.30
- 0	0.00	-0.04	-0.07	-0.10	-0.12	-0.15	-0.18	-0.22	-0.25	-0.28	-0.30
-10	-0.30	-0.32	-0.35	-0.38	-0.42	-0.44	-0.47	-0.50	-0.53	-0.56	-0.58
-20	-0.58	-0.60	-0.61	-0.64	-0.67	-0.68	-0.70	-0.72	-0.75	-0.77	-0.79
-30	-0.79	-0.80	-0.82	-0.83	-0.84	-0.86	-0.87	-0.88	-0.89	-0.90	-0.91
-40	-0.91	-0.92	-0.93	-0.94	-0.95	-0.95	-0.95	-0.96	-0.96	-0.97	-0.98
-50	-0.98	-0.99	-1.00	-1.00	-1.00	-0.98	-0.96	-0.94	-0.91	-0.88	-0.84
-60	-0.84	-0.84	-0.91	-1.04	-1.19	-1.46	-1.69	-1.89	-2.16	-2.46	-2.79
-70	-2.79	-3.16	-3.49	-3.67	-3.81	-3.91	-4.00	-4.07	-4.11	-4.11	-4.07
-80	-4.07	-4.00	-3.93	-3.84	-3.74	-3.60	-3.44	-3.16	-2.63	-2.10	0.00

Table 1-E--Estimated symmetrical part of annual variation (AV) in geomagnetic vertical component (Z), appropriate to geomagnetic latitude (Φ = 64°0), 1905-1942; also multiplicative latitude-factors for obtaining symmetrical part in any latitude from given values

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1905	- 0.4	- 5.8	- 3.4	- 0.3	+ 7.6	+ 6.9	+ 6.4	- 3.1	- 8.4	+ 1.9	- 9.0	+ 6.9
1906	+ 8.9	- 7.1	- 4.1	- 2.5	- 2.6	+ 5.7	+ 2.9	- 1.0	- 4.3	+ 0.6	+ 6.1	- 1.8
1907	+ 2.3	-24.1	- 2.8	+ 4.6	- 4.1	- 0.9	- 0.9	+ 5.0	- 4.1	+ 2.3	+ 6.8	+15.0
1908	+ 9.1	+ 6.8	- 5.0	- 0.5	- 0.5	+ 7.7	+ 9.1	+ 0.5	-22.3	- 7.7	- 5.9	+ 7.3
1909	+ 4.1	+ 3.6	- 1.8	+ 7.3	- 5.9	+10.5	+12.3	+ 8.2	- 7.7	-29.1	- 0.9	+ 0.9
1910	+ 1.9	+ 2.9	- 5.2	- 8.9	- 3.9	+ 5.3	+ 8.0	- 3.6	- 1.0	- 8.4	+ 5.7	+ 8.5
1911	+ 5.9	- 3.2	- 1.3	- 2.8	- 3.2	+ 0.9	+ 0.5	- 0.9	- 0.9	- 0.9	+ 4.6	+ 0.5
1912	- 3.2	+ 0.9	0.0	- 0.9	- 2.8	- 1.3	- 0.9	- 5.4	- 4.6	+ 3.6	+ 4.1	+ 8.2
1913	+ 7.7	+ 6.4	+ 3.6	- 1.8	- 0.5	- 5.0	- 4.6	+ 0.9	- 4.1	- 5.0	+ 1.8	+ 3.6
1914	+ 4.6	+ 2.5	- 1.6	- 6.3	+ 4.3	+ 3.4	+ 1.8	- 2.1	- 3.0	- 4.3	- 3.0	+ 3.6
1915	+ 7.6	+ 6.0	+ 1.5	+ 2.1	+ 4.8	- 9.1	- 1.1	+ 0.3	- 0.9	- 6.7	- 7.8	+ 3.7
1916	+ 6.4	+13.6	-12.3	- 1.3	- 1.3	+ 7.3	+ 1.8	- 2.3	- 7.7	- 6.4	- 1.3	+ 2.8
1917	-11.4	0.0	+ 5.0	0.0	+ 0.5	+ 5.0	+ 1.8	-21.0	+ 5.0	+ 3.6	+10.9	+ 4.1
1918	+14.1	+ 6.8	+ 3.2	- 3.6	- 1.3	+ 4.1	+ 5.4	- 3.2	- 7.7	- 7.7	- 0.5	- 8.2
1919	+ 3.4	+ 2.5	- 8.5	- 1.9	- 9.3	+11.5	+10.8	- 8.1	-12.3	-10.8	+12.5	+ 9.7
1920	+13.3	+ 8.5	-15.3	-12.8	+ 2.6	+ 9.5	+ 7.3	+ 1.5	-11.6	- 6.7	+ 1.1	+ 6.1
1921	+13.6	+20.3	+ 9.9	+ 3.2	-25.7	- 6.7	0.0	- 2.5	- 5.4	- 7.4	- 1.1	+ 1.6
1922	+ 4.3	+ 1.3	- 7.3	- 7.2	- 3.3	+ 2.0	- 0.2	- 2.6	- 5.4	- 0.3	+ 8.4	+11.9
1923	+ 7.7	+ 0.2	- 4.6	- 0.5	- 2.1	- 0.2	- 0.3	+ 0.7	- 1.0	- 9.0	+ 2.6	+ 4.3
1924	- 1.2	+ 1.2	+ 2.5	+ 5.4	- 1.2	- 4.8	- 1.8	+ 1.8	- 6.7	- 1.2	+ 0.7	+10.9
1925	+ 7.3	+ 6.7	+ 7.3	+ 3.0	+ 5.4	- 2.5	+ 1.2	- 2.5	-15.7	-15.2	- 2.5	+ 3.0
1926	- 0.7	- 8.5	-12.1	-10.3	0.0	+ 8.5	+10.3	+ 4.8	- 7.3	- 8.5	+12.1	+ 8.8
1927	+ 4.3	+ 1.2	- 9.7	- 5.4	+ 0.7	+14.6	+ 3.0	- 5.4	- 4.8	-15.7	+ 7.9	+ 9.1
1928	+15.7	+13.4	+ 9.1	+10.3	+ 2.5	+ 0.7	-21.8	-10.9	- 9.1	-14.6	- 1.2	+11.5
1929	+ 3.6	- 3.6	-17.0	+ 2.5	+ 5.4	+10.9	+ 1.8	+ 5.4	0.0	- 4.3	- 2.5	- 4.3
1930	+ 8.5	+ 4.8	+ 1.8	- 5.4	- 1.8	- 3.0	+ 0.7	- 2.5	- 8.5	-10.3	+ 0.7	+13.9
1931	+ 7.3	+ 4.3	+ 1.8	+ 7.9	+ 6.1	+ 6.7	+ 4.3	- 2.5	-10.3	-13.9	- 9.1	- 4.3
1932	+ 6.1	- 1.8	- 7.9	-10.9	- 3.6	+ 6.1	+ 9.7	+ 2.5	- 3.6	- 1.8	+ 5.4	+ 3.6
1933	+ 3.0	+ 1.8	- 1.2	- 3.0	- 2.5	+ 5.4	+ 9.7	- 3.0	- 9.1	- 2.5	+ 1.8	+ 4.8
1934	+ 4.8	0.0	- 5.4	+ 1.2	+ 3.0	+ 6.1	+ 7.3	- 6.7	- 9.1	- 2.5	+ 3.6	+ 1.2
1935	- 0.7	- 1.8	- 4.3	0.0	+ 4.8	+ 4.8	+ 5.4	+ 7.3	- 7.9	- 9.1	+ 0.7	+ 3.0
1936	- 2.5	-11.5	- 7.9	-13.9	0.0	+ 1.2	+ 1.2	+10.3	+ 8.5	+ 1.2	+ 1.8	+12.1
1937	+ 5.4	- 5.4	- 3.0	- 6.7	- 5.4	+ 5.4	+ 7.9	- 3.0	+ 1.8	-19.4	+ 5.4	+13.9
1938	-18.2	- 5.4	- 0.7	- 7.3	- 4.3	+17.5	+ 6.7	+ 6.7	- 1.8	- 7.9	+ 6.7	+ 6.7
1939	+23.6	+ 1.2	- 4.8	-17.5	-10.3	+ 6.7	+ 0.7	- 5.4	- 2.5	-15.2	+10.9	+13.9
1940	- 0.7	+ 6.7	-10.9	-15.2	+ 1.8	+ 3.0	+ 5.4	+ 4.3	- 1.8	- 3.0	- 2.5	+ 9.1
1941	+15.2	+ 9.1	-23.6	- 1.8	+10.3	+17.5	-12.8	- 0.7	-16.4	- 1.8	- 1.8	+10.9
1942	+ 3.0	+ 1.8	-13.4	-10.3	+ 8.5	+13.9	+ 6.7	+ 1.2	- 4.3	- 9.1	- 1.8	+ 4.8

Φ °	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
+80	-1.06	-1.03	-1.00	-0.97	-0.94	-0.91	-0.88	-0.85	-0.82	-0.79	-0.76
+70	-0.74	-1.32	-1.29	-1.26	-1.23	-1.20	-1.17	-1.14	-1.11	-1.09	-1.06
+60	+0.27	+0.46	+0.77	+0.95	+1.00	+1.01	+1.00	+0.96	+0.74	0.00	-0.74
+50	-0.12	-0.12	-0.11	-0.10	-0.09	-0.08	-0.06	-0.02	+0.02	+0.14	+0.27
+40	-0.15	-0.15	-0.15	-0.14	-0.14	-0.14	-0.13	-0.13	-0.13	-0.12	-0.12
+30	-0.13	-0.14	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15
+20	-0.09	-0.10	-0.10	-0.10	-0.11	-0.12	-0.12	-0.13	-0.13	-0.13	-0.13
+10	-0.04	-0.04	-0.05	-0.06	-0.06	-0.06	-0.07	-0.07	-0.07	-0.08	-0.09
+ 0	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02	-0.03	-0.04
- 0	0.00	0.00	+0.01	+0.01	+0.01	+0.02	+0.02	+0.02	+0.02	+0.03	+0.04
-10	+0.04	+0.04	+0.05	+0.06	+0.06	+0.06	+0.07	+0.07	+0.07	+0.08	+0.09
-20	+0.09	+0.10	+0.10	+0.10	+0.11	+0.12	+0.12	+0.13	+0.13	+0.13	+0.13
-30	+0.13	+0.14	+0.15	+0.15	+0.15	+0.15	+0.15	+0.15	+0.15	+0.15	+0.15
-40	+0.15	+0.15	+0.15	+0.14	+0.14	+0.14	+0.13	+0.13	+0.13	+0.12	+0.12
-50	+0.12	+0.12	+0.11	+0.10	+0.09	+0.08	+0.06	+0.02	-0.02	-0.14	-0.27
-60	-0.27	-0.46	-0.77	-0.95	-1.00	-1.01	-1.00	-0.96	-0.74	0.00	+0.74
-70	+0.74	+1.32	+1.29	+1.26	+1.23	+1.20	+1.17	+1.14	+1.11	+1.09	+1.06
-80	+1.06	+1.03	+1.00	+0.97	+0.94	+0.91	+0.88	+0.85	+0.82	+0.79	+0.76

Table 1-F--Estimated sinusoidal part of annual variation (AV) in geomagnetic vertical component (Z), appropriate to geomagnetic latitude ($\Phi = 53.^\circ5$), 1905-1942; also multiplicative latitude-factors for obtaining sinusoidal part in any latitude from given values

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1905	- 2.7	- 2.6	- 1.8	- 0.6	+ 0.8	+ 2.0	+ 2.7	+ 2.6	+ 1.8	+ 0.6	- 0.8	- 2.0
1906	- 2.7	- 2.6	- 1.8	- 0.6	+ 0.8	+ 2.0	+ 2.7	+ 2.6	+ 1.8	+ 0.6	- 0.8	- 2.0
1907	- 3.3	- 3.2	- 2.3	- 0.7	+ 1.1	+ 2.5	+ 3.3	+ 3.2	+ 2.3	+ 0.7	- 1.1	- 2.5
1908	- 2.3	- 2.2	- 1.6	- 0.5	+ 0.7	+ 1.7	+ 2.3	+ 2.2	+ 1.6	+ 0.5	- 0.7	- 1.7
1909	- 2.8	- 2.7	- 1.9	- 0.6	+ 0.9	+ 2.1	+ 2.8	+ 2.7	+ 1.9	+ 0.6	- 0.9	- 2.1
1910	- 2.7	- 2.6	- 1.9	- 0.6	+ 0.9	+ 2.1	+ 2.7	+ 2.6	+ 1.9	+ 0.6	- 0.9	- 2.1
1911	- 2.2	- 2.2	- 1.5	- 0.5	+ 0.7	+ 1.7	+ 2.2	+ 2.2	+ 1.5	+ 0.5	- 0.7	- 1.7
1912	- 2.1	- 2.0	- 1.4	- 0.4	+ 0.7	+ 1.6	+ 2.1	+ 2.0	+ 1.4	+ 0.4	- 0.7	- 1.6
1913	- 2.1	- 2.0	- 1.4	- 0.4	+ 0.7	+ 1.6	+ 2.1	+ 2.0	+ 1.4	+ 0.4	- 0.7	- 1.6
1914	- 1.1	- 1.1	- 0.8	- 0.2	+ 0.4	+ 0.9	+ 1.1	+ 1.1	+ 0.8	+ 0.2	- 0.4	- 0.9
1915	- 2.1	- 2.0	- 1.4	- 0.4	+ 0.7	+ 1.6	+ 2.1	+ 2.0	+ 1.4	+ 0.4	- 0.7	- 1.6
1916	- 2.1	- 2.0	- 1.4	- 0.4	+ 0.7	+ 1.6	+ 2.1	+ 2.0	+ 1.4	+ 0.4	- 0.7	- 1.6
1917	- 3.0	- 2.9	- 2.1	- 0.6	+ 1.0	+ 2.3	+ 3.0	+ 2.9	+ 2.1	+ 0.6	- 1.0	- 2.3
1918	- 3.0	- 2.9	- 2.0	- 0.6	+ 0.9	+ 2.3	+ 3.0	+ 2.9	+ 2.0	+ 0.6	- 0.9	- 2.3
1919	- 3.5	- 3.4	- 2.4	- 0.7	+ 1.1	+ 2.6	+ 3.5	+ 3.4	+ 2.4	+ 0.7	- 1.1	- 2.6
1920	- 2.3	- 2.2	- 1.6	- 0.5	+ 0.7	+ 1.7	+ 2.3	+ 2.2	+ 1.6	+ 0.5	- 0.7	- 1.7
1921	- 2.8	- 2.7	- 1.9	- 0.6	+ 0.9	+ 2.1	+ 2.8	+ 2.7	+ 1.9	+ 0.6	- 0.9	- 2.1
1922	- 2.8	- 2.7	- 1.9	- 0.6	+ 0.9	+ 2.1	+ 2.8	+ 2.7	+ 1.9	+ 0.6	- 0.9	- 2.1
1923	- 2.2	- 2.1	- 1.5	- 0.5	+ 0.7	+ 1.7	+ 2.2	+ 2.1	+ 1.5	+ 0.5	- 0.7	- 1.7
1924	- 2.0	- 1.9	- 1.4	- 0.4	+ 0.6	+ 1.5	+ 2.0	+ 1.9	+ 1.4	+ 0.4	- 0.6	- 1.5
1925	- 2.6	- 2.6	- 1.8	- 0.6	+ 0.8	+ 2.0	+ 2.6	+ 2.6	+ 1.8	+ 0.6	- 0.8	- 2.0
1926	- 2.6	- 2.5	- 1.8	- 0.5	+ 0.8	+ 1.9	+ 2.6	+ 2.5	+ 1.8	+ 0.5	- 0.8	- 1.9
1927	- 2.2	- 2.1	- 1.5	- 0.5	+ 0.7	+ 1.6	+ 2.2	+ 2.1	+ 1.5	+ 0.5	- 0.7	- 1.6
1928	- 2.3	- 2.2	- 1.6	- 0.5	+ 0.7	+ 1.7	+ 2.3	+ 2.2	+ 1.6	+ 0.5	- 0.7	- 1.7
1929	- 1.9	- 1.9	- 1.3	- 0.4	+ 0.6	+ 1.5	+ 1.9	+ 1.9	+ 1.3	+ 0.4	- 0.6	- 1.5
1930	- 2.0	- 1.9	- 1.3	- 0.4	+ 0.6	+ 1.5	+ 2.0	+ 1.9	+ 1.3	+ 0.4	- 0.6	- 1.5
1931	- 1.7	- 1.6	- 1.2	- 0.4	+ 0.5	+ 1.3	+ 1.7	+ 1.6	+ 1.2	+ 0.4	- 0.5	- 1.3
1932	- 1.9	- 1.8	- 1.3	- 0.4	+ 0.6	+ 1.4	+ 1.9	+ 1.8	+ 1.3	+ 0.4	- 0.6	- 1.4
1933	- 1.6	- 1.5	- 1.1	- 0.3	+ 0.5	+ 1.2	+ 1.6	+ 1.5	+ 1.1	+ 0.3	- 0.5	- 1.2
1934	- 1.5	- 1.5	- 1.1	- 0.3	+ 0.5	+ 1.2	+ 1.5	+ 1.5	+ 1.1	+ 0.3	- 0.5	- 1.2
1935	- 2.0	- 1.9	- 1.4	- 0.4	+ 0.6	+ 1.5	+ 2.0	+ 1.9	+ 1.4	+ 0.4	- 0.6	- 1.5
1936	- 3.1	- 3.0	- 2.1	- 0.7	+ 1.0	+ 2.4	+ 3.1	+ 3.0	+ 2.1	+ 0.7	- 1.0	- 2.4
1937	- 2.6	- 2.5	- 1.8	- 0.6	+ 0.8	+ 2.0	+ 2.6	+ 2.5	+ 1.8	+ 0.6	- 0.8	- 2.0
1938	- 2.8	- 2.7	- 1.9	- 0.6	+ 0.9	+ 2.1	+ 2.8	+ 2.7	+ 1.9	+ 0.6	- 0.9	- 2.1
1939	- 2.4	- 2.3	- 1.6	- 0.5	+ 0.8	+ 1.8	+ 2.4	+ 2.3	+ 1.6	+ 0.5	- 0.8	- 1.8
1940	- 2.2	- 2.1	- 1.5	- 0.5	+ 0.7	+ 1.6	+ 2.2	+ 2.1	+ 1.5	+ 0.5	- 0.7	- 1.6
1941	- 1.7	- 1.7	- 1.2	- 0.4	+ 0.5	+ 1.3	+ 1.7	+ 1.7	+ 1.2	+ 0.4	- 0.5	- 1.3
1942	- 2.0	- 1.9	- 1.3	- 0.4	+ 0.6	+ 1.5	+ 2.0	+ 1.9	+ 1.4	+ 0.4	- 0.6	- 1.5

Φ	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
°											
+80	-12.4	-12.6	-12.8	-13.0	-13.2	-13.4	-13.6	-13.7	-13.8	-13.9	-14.0
+70	-10.2	-10.5	-10.7	-10.9	-11.1	-11.3	-11.5	-11.8	-12.0	-12.2	-12.4
+60	- 5.1	- 6.4	- 7.3	- 8.0	- 8.5	- 8.9	- 9.3	- 9.6	- 9.8	-10.0	-10.2
+50	+ 1.3	+ 1.2	+ 1.1	+ 1.0	+ 0.9	+ 0.8	+ 0.6	0.0	- 0.9	- 3.0	- 5.1
+40	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.5	+ 1.5	+ 1.5	+ 1.4	+ 1.4	+ 1.3	+ 1.3
+30	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
+20	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
+10	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
+ 0	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
- 0	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
-10	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
-20	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
-30	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6
-40	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.5	+ 1.5	+ 1.5	+ 1.4	+ 1.4	+ 1.3	+ 1.3
-50	+ 1.3	+ 1.2	+ 1.1	+ 1.0	+ 0.9	+ 0.8	+ 0.6	0.0	- 0.9	- 3.0	- 5.1
-60	- 5.1	- 6.4	- 7.3	- 8.0	- 8.5	- 8.9	- 9.3	- 9.6	- 9.8	-10.0	-10.2
-70	-10.2	-10.5	-10.7	-10.9	-11.1	-11.3	-11.5	-11.8	-12.0	-12.2	-12.4
-80	-12.4	-12.6	-12.8	-13.0	-13.2	-13.4	-13.6	-13.7	-13.8	-13.9	-14.0

Table 1-G--Daily mean departures from monthly means on horizontal intensity*(H)

75° west mer. day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1905						
1	+10	+ 7	+ 4 t	-20 t	-12	0 q	+ 6	+27	+10	- 4 q	+17	+ 2
2	+ 9	+ 6	-25	-19 t	- 7	+ 3	0	-20	+ 7	0 q	+24	+ 3
3	+10	-32	-32	-12	- 3	+ 3	+ 7	- 6	- 6	+ 6 q	+23	+10
4	- 2	-18	-17 au	- 8	- 2	+ 7	+11	+ 1	-10	+ 6 q	+ 6	- 3
5	-14	-16	- 8	- 8 cu	- 6	+ 3	+ 4	+ 5 t	- 9	+ 6 q	+ 1	- 8
6	-15	- 8	- 2	- 6	+ 1 au	+ 5	-12	+ 4	+ 3	- 8 q	+15	- 6
7	- 4	- 8	-16	- 4	- 2	- 2	- 6	- 8 au	+ 4	- 7 q	+14	- 1
8	+ 3	- 4	-18	- 3	+ 2	+ 8	- 8	-10	+ 9	- 4 q	+14	0
9	+ 6	+ 1	- 5 cu	- 2	0	+ 7	- 8	+ 2	+12	+ 1 q	+19 au	+ 2
10	+ 4	- 2	- 2 t	- 4	+ 1	-10 au	- 3	+12	0	+ 4 q	+21	+ 6
11	- 2	+ 6	+ 2 t	- 2	+ 4	- 8 t	- 4	+ 4	- 4	+ 3 q	+24 au	+12
12	0	+ 4	- 3	+ 2	+ 8	- 6	0	+ 9	+ 5 bu	0 q	-25	+ 2
13	+ 6	- 5 t	- 4	- 1	+ 8	- 6	- 2	+ 4	+ 6 bu	- 6 q	-12	-25
14	- 3	- 2	- 5	+ 2	+ 3 t	- 2	- 5	- 8	+ 2	+ 4 q	- 7	-12
15	- 2	+ 2	- 4	- 4	+ 8 t	0	0	- 6	+ 6	+ 9 q	-36 au	- 4
16	- 2	0	- 3	+ 3	+10 t	- 3	+ 8	- 6	+ 6	+ 1 q	-56 cu	+ 4
17	- 6	+ 2	+ 2	+ 4	+ 4	- 1	+ 8	- 4	+ 7	- 4 q	-21	+ 2
18	+ 2	+ 2	+ 7	+ 6	+ 4	- 2	+11	+ 2	+ 2	+ 1 q	-12	+ 3
19	- 2	+ 5	+ 8	+ 8	- 6	+ 2	+ 2	+ 1	-29	+ 4 q	- 8	+ 2
20	+ 2 t	+10	+ 5	+ 4	- 1	+10	+ 5	+ 2	-10	+ 7 q	- 6	-14
21	- 2	+14	+ 8	+ 2	0 au	+ 8	0	+ 7 q	- 7	+ 4 q	- 6 au	- 4
22	- 2	+ 2	+12	+ 4	+ 5 t	- 6	+ 2	+ 8	+ 6	+ 3 q	- 5	- 3
23	+ 4	0	+ 8	+10	+10 t	-14	+10 bu	+ 6	+ 3	+ 6 q	- 6 au	+ 2
24	0	+ 4	+11	+14	+ 4 t	- 6 t	-10	+ 4	+ 6	+ 9 q	+ 3 bu	+ 4
25	- 2	+ 4	+10	+16	- 2	- 2	- 6	- 1	+10	- 4 q	+11 bu	+ 5
26	- 1	+ 4	+12 t	+12	+ 2 au	- 2	- 3	+ 4	- 4	- 8 q	+ 5 bu	+ 4
27	+ 1	- 2	+ 8	+ 9	- 4	0	0	+ 2	-11 q	0 q	- 1	+ 6
28	+ 5 t	+14	+11	+ 8	- 8	+ 9	-10 t	0	- 1 q	-14 q	0	+ 2
29	- 2		+18 t	0	-10	+ 3	0	- 8	- 4 q	-11 q	+ 6	0
30	- 2		+ 8 t	- 2	- 4	- 2 t	0	-19	- 6 q	- 8 q	+12	0
31	+ 1 t		+18		- 4		0	-10		- 2 q		+ 2

75° west mer. day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1906						
1	+ 4 t	- 7	-13	+ 2	0	+10	+15 au	+ 2	+ 8	- 7 q	+ 6 q	+16
2	+ 2	0	- 2	+ 6	+ 4	-22	+ 6	+ 8	+ 6	- 4 q	+ 4	+ 8
3	+ 2	- 1	+ 2	+ 8	+ 2	0	+ 6	+11	+ 4	0 q	+ 6 q	+ 9
4	- 2	+ 9	- 6	- 2	+ 4	- 7	+ 3	+12	- 7	+ 1 q	- 1 q	+ 8 au
5	0	+ 4 t	- 4	+ 4	+ 8	- 7 au	- 6	+11 au	- 2	- 3 q	0 q	+14 au
6	- 2	+ 9	- 3	+ 4	+14	- 3 au	-10	+16 au	+ 2	- 1 q	+ 6	+20 aut
7	- 1	+10	- 4	+ 8	+11	- 1 au	- 6	+ 6 au	+ 4	- 1 q	+ 4 t	+10 au
8	+ 1	+14	- 1	+20	+ 9	- 8	- 4	-14	+13	+ 4 q	- 8	-18 au
9	+ 2	+14	- 2	- 5	0	-14	+ 6	- 7 au	+13	+ 7 q	- 5	- 8
10	+ 1	+12	0	-10	+ 4	- 3 au	+ 2	- 2	+11	+ 9 q	+ 2	+ 2
11	+ 2	+19	+ 3	-14	+ 3	- 1	- 5	- 5 au	+10	+ 6 q	- 4	+ 5
12	+ 3	+15	+ 4	- 8	+10	+ 1 bu	-11 au	-12	+10	0 q	- 2 t	+ 8
13	- 4	+14	- 2	0	+12 au	+ 5 bu	- 8	-11	+ 6	- 6 q	+ 1 t	+12
14	- 5	+18	- 4	+ 2	+23	+ 5 bu	- 4	- 6	+ 4	- 2 q	+ 1	+10
15	- 3	- 1 q	+ 1	+ 6 au	-24 au	+12 bu	- 2	+ 2	+ 4	+ 3 q	+ 2	+ 6
16	+ 1	- 8	0	+ 7	-12	- 3 bu	- 1	+ 4	+ 2	+ 4 q	+ 3	- 1
17	+ 2	+ 4	+12	+12	-11	- 5 bu	+ 2 au	+ 1	+ 2	+ 6 q	+ 9	- 6
18	+ 1	0	+ 2	+ 8	- 2	- 2 bu	+ 2	0	+ 2	+ 6 q	+ 1 au	+ 2
19	- 8	-22	+ 5	+ 1	- 9 au	- 1	+ 8 au	0	+ 6	- 4 q	+ 2	+ 5
20	- 8	- 4	+ 7	+ 8	-24	- 3 au	+ 7 au	- 1	+ 7	- 6 q	+ 4	+ 8
21	- 8	+ 2	+10	+ 4	-16	- 1	0	- 3	+ 8	+ 2 q	-14 q	+ 4 cu
22	+ 3	+ 6	+ 8	- 3	- 6	+ 5	+ 2	- 2	-22	-10 q	-20	-36 cu
23	+ 3	+ 7	+10	-14	- 6	+13	+ 8	+ 1	-30	- 2 q	-10	-20
24	+ 9	-29	0	-16 au	+ 4	+11	+ 6	+ 2	-20	+ 4 q	- 2	-12
25	+ 3	-28	-16	-11	- 4	+10	- 4	+11 au	- 8	+ 4 q	+11	- 7
26	+ 5	-20	- 5	- 4	+ 6	+10	+ 2	+ 6	-14	0 q	0	- 6
27	- 5	-12	- 5 au	- 6	+ 6	+ 8	-16	- 6 au	-10	- 4 q	- 1	- 4
28	- 2	-21	0 au	- 2	- 4	+ 9	- 4	- 9	- 2	- 7 q	- 1	- 4
29	+ 6		- 2	- 4	- 4	+12 au	+14	- 8 au	- 2	- 2 q	+ 2	+ 4
30	+10		0	- 5	- 1 au	+ 9	- 9 bu	- 9	- 6	+ 1 q	+ 4 au	+ 1
31	-14		0 au		+ 2		- 8	-10 au		- 4 q		+ 8

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1907						
1	+14	+26	- 2	+ 6 q	+ 6	+ 4	+12	+ 6	+ 7	+ 2	+12	+ 9 au
2	+ 4	+24	- 1	+ 4 q	+13 au	+ 2	+10	- 1	+ 5	+ 7	+18 t	+ 5
3	+ 4	+29	+10	+13 q	+ 8	+ 8	+ 8	+ 1	+12	+11	-25	+ 9
4	+ 8	+27	+16	+10 q	+ 6	+ 5	+ 6	- 2	+ 9	+ 7	-10	+17
5	+ 2	+32	+ 8	+ 1 q	+16	+ 6	+14	+ 2	+12	+14	- 7	0
6	-11 au	+32	+12	+ 2 q	+10	+ 5	+ 7	+ 2	+ 6	+14	+ 6	+ 2
7	- 8 au	-18	+19	+ 2 q	+ 8	+ 1	+ 8	+ 2	+ 9	+16	+10	+ 2 au
8	-11 q	- 2	+14	+ 3 q	+12	+ 1	+ 2	+ 4	+10	+ 3	+ 4	- 6
9	- 4 au	-93 r	+ 8	+ 7 q	+14	+10 a	+ 4	+ 4	+10	+ 6	+ 3	0
10	+12 au	-56	-20	+ 8 q	+14	- 6	- 2	+ 2	-14	+ 7 bu	-14	-10
11	-12	-26	-14	+ 8 q	+ 5	- 2	-24	+ 2	-33	+12	-23	-11 au
12	-14	-16	-41 au	+ 3 q	- 2	- 4	-16	+ 4	-34	+13 bu	- 9	-16
13	- 3	- 6	- 9 q	+ 3 q	-12	0	-10	+ 4	-12 au	+ 8	- 2	-16
14	- 8	-30	- 8	-11 q	-16	0	- 8	+ 8	+ 1 q	-24	+ 4	- 6
15	- 7	-21	+ 3	- 2 q	- 9	+ 4	0	+12	+12 q	-20	+10	- 2
16	- 6	- 5	+ 4	-15 q	- 2	+ 6	+ 7	+11 au	+ 8	-12	+ 8	- 8
17	- 2	+ 6	+ 7	- 7 q	0	+10	+ 2	+ 2	- 7 q	- 6	+ 8	- 8
18	+ 2	+ 8	+10	- 1 q	-14	+13	0	0	-14 q	- 4	+ 7	- 5
19	+ 4	- 2	+ 6	- 4 q	-22	-12	+ 4	+ 6	- 6	+ 3	+ 6	+ 3
20	+ 1	+ 2	+ 2	- 3 q	-18 aut	-22	+ 6	0	- 6	0	+10	0
21	- 2	+ 4	-19 au	0 q	- 2	- 6	+ 9	-18	+ 2	+ 5	-20	- 4
22	-14	+ 2	-20	- 2 q	- 7	-14	+ 4	-10	+ 4	-17 au	-30	- 1
23	- 2	+ 9	-12	- 2 q	0	-18	- 1	-17	+ 4	-10	-15	+ 6
24	0	0	- 4 q	+ 3 q	- 6	- 9	+ 5	-12	+ 6	- 2	- 6	+ 8
25	+ 7	+ 7	+ 1 q	- 3 q	+ 3	- 4	+ 7	- 4	0	- 8	0	+ 9
26	+ 4	+10	- 2	- 2 q	+ 2	- 2	- 6	- 5	- 6	- 6	+ 9	+ 5
27	+ 8	+10	- 2	-11 q	0	+ 2	- 8	- 2	- 2	-22	+13	+ 8
28	+ 5	+10	+ 7	0 q	+12	+ 2	-18	+ 6	- 2	- 6	+ 8	+ 2
29	+ 1		+ 9	- 1 q	-12	+ 1	-17	+ 4	+ 9	- 3	+12	+ 2
30	+ 8		+ 7 q	+ 9 q	- 5	+ 6	- 4	- 2	0	- 3	+15	- 4
31	+10		+ 8 q		+ 8		- 2	- 8		+ 3		0

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1908						
1	+12	+ 2	- 9	- 8	+12 au	- 6	- 6	+26	+28	-24	- 2	0
2	+ 8	+ 7	-10	- 5	+ 6	+ 7	+ 2	+18	+33 au	-20	- 3	+ 1 au
3	+ 9	0	0	0	+ 6	+10	+ 4	+18	+36	-19	+ 8	+ 4
4	+ 6	- 6 t	- 6	+ 2	+ 5	0	+ 8	+ 8	+17 au	-18	+ 9	-14 au
5	- 2	-12	+ 8	+ 2	+ 7 au	- 2	+ 4	+12	-15 au	-18	+11	-24
6	0	-14	+ 4	- 2	+10	+ 1	0	+15	+ 8	-14	+16	-19
7	-12	-10	+12	- 9	+15	+ 4	- 4	+ 3 au	+14	- 2	+ 8	- 8
8	-20	- 4	+ 9	- 4	+10	0	0	+ 1	+30	- 2 t	-38	- 5
9	-20	- 4 t	+ 2	+ 5	+ 9	+ 3	+ 2	-29 au	+12	+ 2	-19 au	- 1
10	-13	+ 3	+10	+ 8	- 1	+ 3 a	+ 8	-14	+ 2	+ 3 au	-16 au	+ 2
11	- 2	- 4	+10	+ 8	-14	+ 3	+ 9	- 4	-15 r	+ 5 au	-10	+ 1
12	- 2	- 6	+12	+13	- 3	+ 7	+ 8	-13	-66 r	-13 q	- 6	+10
13	- 2	0	+16	+10	+ 2	+ 8	0	-12	-30	- 9 au	- 2	0
14	+ 5	+ 2	+16	+14	- 2	- 4	+10	- 6	-13	0	- 3	0
15	+ 5	+10	+20	-16	0	- 6	- 2	- 2	0	0	+ 4	- 1
16	+ 8	+ 2	+ 8	-14	+ 9	- 1	-12	+ 5	- 8	+ 6 au	+12	- 1
17	+ 2	+ 3	+ 2	-12	+ 8	+ 6	-12	+ 8	- 4	+ 7 aut	-33 q	+ 5
18	+ 6	+ 3	+ 4	0	+ 7	- 4	-10	+ 4	- 6 au	+ 4	-18	+ 4
19	+ 4	+ 4	+ 5	- 2	+ 6	- 4	- 6	-24	- 3 au	+ 6	-11 q	- 1
20	+12	+ 4	+ 2	+ 6	+ 7	- 8	- 3	-10	0 au	+10 t	+ 2	+ 4
21	+ 1	+10	+ 4	+18	+12	- 8	0	-18	+ 4 au	+ 6	+ 8	+ 9
22	+ 7	+ 2	+ 8	+ 6	0 t	- 4	+ 1	- 7	+11 au	+ 8	+14	+10
23	+10	- 4	+14	0	-11 au	- 2	+ 1	- 5	+14	+16	+14	+ 7
24	+ 2	+ 6	+12	0	-12	+ 9	+ 6	- 2	+19	+14	+ 4	+ 3
25	- 4	+ 2	+12	- 2	-26	+ 8	-13	- 6	+14	+14 t	+ 4	+10
26	- 6	+ 4	-37 qu	0	-42	- 7	- 4	0	+10	+14 t	+ 6	- 1
27	+ 2	+ 6	-52 bu	- 8	- 9 cu	- 8	- 2	+ 4	+14 au	+10	+10	- 2
28	+ 3	+ 4	-34 bu	0	- 8 cu	0	- 3	+ 8	- 5	+ 8	+ 5	- 2
29	-15	+ 1	-22 bu	- 3	-10	- 4	+ 1	+ 7	-100	+ 9 au	0	- 2
30	- 9		-12 bu	+ 4	- 5 au	- 6	+ 1	+14	-56 q	+10	+ 4	- 3
31	- 4		-12 bu		- 8		+ 4	+ 7 u		-16		+ 6

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1909						
1	+13 au	-22	+14	- 7 q	+10 q	0	+ 2	+ 9	+ 7	-24	+ 1	-34
2	+ 4	-28	+14	- 7 q	+14 q	- 4	+10	+ 2	+12 au	-16	+ 2	-18
3	-42	-24	+10	- 4 q	+19 q	+ 3	+ 4	0	+15 ku	- 7	+ 3 au	- 5
4	-32	- 2	- 2	- 6 q	+14 q	+ 5	+ 8	+ 3	+18	- 2	+ 3 au	- 8
5	-12	- 4	- 1	0 q	+18 q	+ 5	0	+ 3	+19	+ 2	+ 6	0
6	- 4	- 6 bu	- 4	0 q	+14 q	+ 3	+ 8	+ 8	+18	+ 1 au	+12	+ 6 q
7	0	- 4 bu	0	+ 2 q	+16 q	+ 8	+15	+ 8	+19	- 8	+ 6	+ 6 q
8	- 1	- 8	+ 8	+ 7 q	+18 q	+ 2	+ 7	+18	+15	-12	+ 6	+10
9	+10	0	+ 4	+ 7 q	+19 q	+ 9	0	-11 au	+15 au	- 4 au	+ 6	+14
10	+10	- 2	+10	+10 q	+20 q	+12	+ 6	+ 4	+21	+ 8	+ 4	+ 8
11	+12	+ 2	+16	+ 2 q	+14 q	- 4	+13	0	+21	+ 6	+ 5	+12
12	+13	+ 4	+17	0 q	+14 q	- 6	+ 2	+ 2	+22 au	+12	+ 4	+12
13	+ 8	+12	+16	+ 3 q	+22 q	- 2	- 3	+ 3	+24 au	+ 8	+ 7	- 4
14	+ 2	+12	+12	+10 q	-95 q	+ 2	0	+ 3	+20 au	+22	+ 7	-36
15	+ 8	+14	+16	+15 q	-46 q	+ 5	- 5	+ 3	+19 au	+19	- 1	- 8
16	+ 8	+15	+15	- 2 q	-28 q	- 4	+ 1	+10	+18 au	+12	- 5	- 2
17	+12	+12	+18	- 4 q	-14 q	- 5	+ 1	+12	+20 au	+14	- 4	+ 3
18	+ 2	+10	+10	- 9 q	-50 q	- 4	+ 2	+ 8	+29 au	-20	0	+ 2
19	+11 q	+18	-34	- 7 q	-25 q	- 3	+ 6	- 6	+30	-30	0	+ 6
20	+11 q	+16	-18	- 1 q	-14 q	+ 3	+10	- 1	+28 au	- 6	-10	+ 9
21	+13	+ 6	-20	- 1 q	- 6 q	+12 t	+ 6	+ 1	- 3 au	0	- 5	-10
22	+ 9	- 3	-12	+ 3 q	+ 1 q	- 4	- 5	- 4	+ 2 au	0	- 6	- 2
23	+21	-12	- 8	+ 4 q	+ 2 q	-13	-14 au	0	+10	-28	- 6	+ 2
24	+23	- 7 au	- 2	+ 6 q	+ 6 q	- 6	-17	0	+19	-12 q	- 4	+ 4
25	- 4	0	+ 1	- 9 q	+14 q	- 4	- 6	0	-202 r	- 4 q	+ 1	+12
26	- 4	+ 7 au	- 6	-12 q	+ 4 q	- 7	- 6	- 6	-111 au	+ 2	+ 7	+ 6
27	0	+ 4	- 9	- 3 q	- 2 q	+ 4	- 8	- 7	-69 au	+ 6	0	+ 1
28	- 8	+ 2	-32	+ 3 q	+ 7 q	+ 6	- 4	- 4	-50	+14	0	+ 4
29	- 4 au		-18	+ 6 q	+10 q	- 4	-11	-26	-40	+ 8	+ 2	+10
30	-36		- 8	+ 6 q	+ 9 q	- 1	- 8	-24	-58	+16	-44	+ 8
31	-40		- 4		+15 q		- 2	-18		+12		+ 8

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1910						
1	- 4	+ 2	+ 2	-18	0	+ 2	- 3	+22	- 1	- 8	0	+ 1
2	+ 2	+ 6	+10	-14	- 2	+ 3	+ 6	+12	0	+ 3	+ 3	- 3
3	+ 9	- 2	+ 7	0	- 3	+ 2	+ 2	+ 6	+ 2	- 2	+12	+ 4
4	+ 6	- 2	+ 4	- 5	+ 1	+ 5	+ 8	+ 8	+ 5	-10	+ 8	+ 3
5	+ 4	- 6	+ 2	+ 2	+ 3	0	-12	+ 8	+ 6	+ 6	+ 6	+ 2
6	+ 1	+ 2	- 4	+ 3	+ 5	+ 7	- 3	+10	+ 3	- 8	+10	+ 2
7	+ 6	+ 4	+ 2	+ 6	+ 1	+14	- 6	+14	- 2	- 4	+ 8	+ 4
8	+ 9	+ 7	+ 2	+ 8	+ 6	+19	- 6	+14	+ 1	+ 2	+ 6	+ 8
9	+12	+10	+ 7	+ 5	+ 8	+ 6	+ 1	+ 4	+14	+12	+ 2	+ 5
10	+12	+ 8	+10	+11	+10	+ 2	- 2	-22	+ 6	+14	+ 4	+ 6
11	+11 q	+ 5	+10	+16 au	+ 8	+ 2	- 4	0	+ 4	+12	+ 6	+ 6
12	+ 9	+ 8	+10	+ 8	+12	+ 1	- 3	+ 4	+ 8	+ 6	+ 5	+14
13	+ 8	+ 3	+12	+ 8	- 6	+ 1	- 2	+10	+12	- 4	+ 8	+ 1
14	+ 8	+12	+10	+12	- 8	+ 2	+ 7	+ 4	+ 6	+ 2	+12	0
15	+10	+11 au	+15	+16	- 2	+ 4	+10	+ 3	+10	+10	+10	- 4
16	+10	+ 6	+ 6	+ 8	- 1	+ 9	+10	+12	+ 8	+11	- 2	- 8
17	+ 6	- 2	+ 8	+14	+ 7	+10	+ 2	+11	+ 7	+14	- 8	0
18	- 6	0	+14	-30	-12	+ 6	+13	+ 7	+ 6	+23	-18	- 2
19	- 2	+ 2	+10	- 6	-12	+ 6	+ 1	0	+10	- 8	-14	- 3
20	+ 6	+ 1	-15	+ 1	- 4	-21	+ 5	+ 2	+ 7	- 8	-19	- 6
21	0	- 2	0	+ 6	+ 4	-18	0	- 6	- 2	- 5	- 6	- 2
22	- 5	-10	+ 7	+ 9	+10	-16	+ 4	-42	-10	- 2	- 7	- 6
23	-18	- 2	+ 8	- 6	+16	-10	+ 3	-14 au	- 4	+ 2	- 4	- 4
24	-22	- 2	+10	+ 1	- 5	- 8	- 7	-12	- 1	0	- 4	- 2
25	-28	-14	+12	+ 2	-12	- 5	- 5	-12	- 6	-13	+ 2	- 4
26	-20	-12	+15	+ 8	- 6	- 7	- 2	- 8	- 8	- 8	+ 5	0 t
27	-12	-11	-26	-32	- 4	- 8	0	+ 2	-10	-20	- 3	+10
28	- 8	-10	-63 au	-12	- 5 bu	- 3	+ 8	-12	-12	-10	- 4	- 8
29	- 2		-26	- 6	- 5	- 2	- 4	-12	-32	- 6	-17	-12
30	+ 2		-28	- 7	- 1	- 7	- 9	-11	-25	0	- 6	- 6
31	+ 3		-31		- 6 au		- 6	- 8		- 3		- 5

* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1911											
1	+ 8	- 2	- 6	+ 4	+ 5	-10	+ 2	0	+ 1	+10	+ 7 q	+10
2	- 2	+ 2	+ 5	+ 4	+ 6	- 1	0	+ 8	+ 3	+ 6	+ 3 q	+ 9
3	- 4	+ 3	+ 2	+ 1	+ 8	+ 7	+ 3	+ 2	+ 8	+ 6	- 4 q	+ 8
4	- 1	+ 6	+ 8	+ 5	+ 8	+ 5	+ 2	+ 5	+12	+10	- 8 q	+ 9
5	- 1	+ 6	0	+ 9	+ 5	- 4	+ 4	+ 2	+ 6	+10	- 3 q	+10
6	- 3 du	+ 6	0	+10	+ 4	- 4	+ 8	+ 2	+ 6	+ 4	- 3 q	+ 3
7	+ 4	+ 6	+ 4	+ 7	-16	- 2	- 2	+ 4	+ 4	0	+ 3 q	- 4
8	0	+ 4	+ 4	+ 5	- 7	0	- 3 q	+ 8	+ 8	+ 1	+ 4 q	+ 3
9	- 5	+ 5	+ 2	-26	0	+ 4	- 4 q	+12	+ 4	0	- 4 q	+ 8
10	0	+10	+10	-18	+ 1	- 3	+ 4	+ 3	+ 1	-40	- 3 q	+ 5 eu
11	0	+ 6	+12	- 4	+ 2	-10	- 4	+ 4	- 6	-11	- 3 q	-36
12	+ 4	+ 9	+10	- 4	+ 2	- 6	- 4	+11	- 2	- 5	- 2 q	-20
13	+ 4	+ 6	+20	+ 3	+15	- 6	0	+ 4	- 2	+ 1	-18 q	-10
14	+ 4	+ 2	+ 4	+ 2	+ 1 du	- 2	+ 1	+ 2	+ 2	- 4	-12 q	- 1
15	+ 6	+ 4	+12	+ 8	-16	- 4	0	+ 4	+ 8	+ 2	-12 q	- 2
16	+ 4	+ 2	+ 4	- 4	-12	- 2	+12	- 4	- 4	- 1	- 7 q	+ 1
17	+ 8	+ 3	+ 5	- 8	- 7	- 5	+ 6	+ 2	- 1	-10	- 1 q	+ 2
18	+ 4	+ 4	+ 6	- 7	- 3	- 2	- 2	+ 4	+ 2	- 9	- 1 q	- 2
19	+ 4	+ 8	+19	- 8	0	+ 3	- 3	+ 6	+ 5	- 8	+ 6 q	+ 5
20	+ 8	+ 6	-20	- 4	0	+10	+ 2	0	-18	- 5	- 4 q	+ 2
21	+ 9	-18	-16	- 6	- 4	+ 6	+ 2	+ 2	-14	- 3	- 1 q	+ 4
22	+ 8	-20	-14	- 8	- 2	+ 4	- 2	+ 8	-12	- 2	0 q	+ 8 t
23	+ 9	-14	-16	0	+ 4	+ 4	- 3	- 8	-12	+ 2	+ 2 q	+ 6 t
24	-10	-12	-10	- 2	+ 1	0	+ 5	-20	- 8	- 1	+ 3 q	+ 6
25	-14	- 6	- 8	+ 6	+10	+ 4	+ 2	-14	- 3	- 3	+ 9 q	+ 4
26	- 7	- 7	-12	+ 4	+ 4	+ 2	+ 1	-14	- 3	+ 2	+ 5 q	-10
27	- 6	- 8	-11	+14	0	+ 6	+ 8	-13	+ 4	+ 8	+ 2 q	-10 t
28	- 8	-16	- 8	+ 8	+ 4	+ 5	- 6	-10	+ 2	+ 5	+ 9 q	- 8
29	- 6		- 6	+ 6	+ 8	- 1	-10	- 8	+ 2	+10	+ 9 q	- 2
30	- 8		- 4	- 6	- 7	+ 8	- 7	- 6	+ 1	+ 9	+10 q	+ 1
31	-12		- 1		-12		-10	- 6 du		+10		- 4

75° west mer. day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1912											
1	- 2	+ 7	+ 6	+10	+ 8	+ 4	+ 4	0	+ 8	- 8 q	+ 4	+ 9 q
2	0	+10	+10	+ 4	+ 2	- 1	+ 6	+ 5	+ 8	+ 1 q	- 4	+ 1 q
3	+ 4	+ 3	+ 8	0	- 2	- 4	+14	+ 4	+12	+ 6 q	+ 4	- 1 q
4	+ 5	+ 8	+ 5	+ 6	+ 4	+ 1	0	+ 6	- 1	+ 7 q	+ 6	0 q
5	+ 3	+10	+ 7	- 5	- 4	0	- 8	- 6	+ 2	+ 8 q	+ 4	+ 3 q
6	+ 2	+10	0	-12	- 5	+ 4	- 4	-16 du	+ 4	+ 6 q	+ 1	- 1 q
7	+ 7	+ 3	0	- 2	- 4	+16	+ 1	- 2	+ 6	+ 7 q	0	- 8 q
8	+ 8	+ 2	- 8	- 2	- 6	- 4	- 4	+ 3	+12	+ 4 q	0	- 9 q
9	+10	+ 8	- 2	+ 7	+ 3	- 8	- 2	+ 6	+ 9	+ 4 q	+ 3	- 1 q
10	+ 4	0	- 9	0	+ 6	- 3	+ 2	+ 5	+ 6	+ 3 q	- 7 q	- 1 q
11	- 3	0	0	+ 2	+ 2	- 5	+ 4	+ 4	+10	- 6 q	-11 q	+ 1 q
12	- 8	- 1	- 1	+ 6	-18	- 2	+ 6	+ 5	+ 2	- 3 q	- 4 q	+ 2 q
13	- 8	- 8	- 2	+ 2	-12	0	+ 4	+ 6	+ 2	- 2 q	+ 1 q	+ 4 q
14	- 6 t	+ 1	+ 8	+ 6	-12	0	+ 8	+ 2	+ 2	-12 q	-18 q	0 q
15	- 8	- 2	0	-14	-10	+ 2	+ 2	+ 4	+ 4	-13 q	- 6 q	+ 1 q
16	- 3	- 1	+ 2	-10	- 4	+ 5	- 4	0	+ 1	- 7 q	- 7 q	+ 6 q
17	+ 4	- 5	+ 1	-10	0	+ 8 du	- 6	0	- 4	- 6 q	- 1 q	+ 6 q
18	- 3	- 6	+ 4	- 9	0	+ 4	+ 2	- 2	-10	- 3 q	- 3 q	+ 8 q
19	+ 2	- 2	+ 5	- 5	- 2	+ 2	+ 6	- 5	- 8	+ 1 q	+ 3 q	+ 1 q
20	0	- 2	+ 6	- 4	- 2	+ 7	- 1	+ 1	- 3 q	+ 6 q	- 2 q	+ 4 q
21	+ 2	- 2	- 6	- 2	+ 4	+ 2	- 3	0	0 q	+ 3 q	+ 3 q	+ 8 q
22	- 4	+ 6	- 9	- 1	+ 9	+ 3	- 3	- 3	- 2	+11 q	+ 4 q	+ 2 q
23	- 6	- 1	- 5	- 4	+ 8	+ 6	- 6	- 7	- 4	- 1 q	0 q	-11
24	- 2	- 7	- 6	+ 2	+10	- 3	- 2	- 7	-21	0 q	+ 1 q	- 3
25	- 4	- 4	+ 2	+ 4	+ 4	- 2	- 1	- 3	-10	+ 2 q	+ 3 q	- 4 du
26	0	- 6	- 4	+ 8	+ 3	- 4	0	+ 2	- 8 au	0 q	+ 1 q	- 2
27	+ 6	- 4	- 5	+ 3	+ 6	- 2	- 8	+ 6	- 9	0 q	+ 1 q	- 2
28	+ 2	- 4	+ 2	+ 5	+ 5	- 9	0	- 2	- 3 du	- 7 q	- 2 q	+ 2
29	- 2	- 4	+ 2	+ 7	+ 4	- 4	0	- 6	- 4	+ 1 q	+ 3 q	- 2
30	0 d		- 2	+ 8	+ 1	- 4	- 3	+ 1	- 4	- 1 q	+ 3 q	- 2
31	- 4		0		+ 5		- 1	- 1		+ 3 q		0

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity* (H) --Continued

75° west mer. day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1913											
1	+ 8 q	+ 4	+ 8	+ 1	+ 9	0	0	+ 8	+10	+10	+ 1 q	+ 1 q
2	+10 q	+ 8	+ 8	+ 7	+10	-12	+ 2	+12	- 1	+10	-13 q	0 q
3	- 7 q	+13	+ 4	+12	+ 6	- 6	0	+ 6	+ 3	+14	- 6 q	- 1 q
4	- 6	+11	+ 4	+10	- 1	- 4	+ 4	+13	+ 4	+ 8	- 4 q	- 3 q
5	+ 2	+10	+ 8	+ 5	-10 q	- 5	+ 4	+ 8	+ 8	- 8	0 q	- 8 q
6	+ 1	+ 6	+ 4	+13	-13 q	- 2	+ 6	+ 6	+ 2	-10	- 4 q	- 1 q
7	+ 6	+ 5	+ 8	+12	-10	- 3	+ 6	+ 7	- 4	- 9	- 3 q	+ 4 q
8	+ 8	+ 4	+ 9	+13	- 3	+ 2	+ 2	+ 4	- 7	- 8	- 1 q	+ 1 q
9	+ 5	+ 4	+11	-15	- 8	0	+ 4	- 4	- 8	- 2	- 2 q	0 q
10	- 6	+ 2	+ 4	-14	-10	- 1	+ 8	- 2	- 6	- 5	+ 2 q	+ 2 q
11	- 4	+11	+ 6	- 9	- 3	0	+ 2	- 1	- 6	- 4	+ 3 q	+ 4 q
12	0	- 1	+ 8	-12	- 5	+ 5	+ 5	- 4	- 2	- 4	+ 2 q	+ 7 q
13	+ 4	+ 4	+12	- 8	- 2	+ 4	+ 4 t	- 6	- 6 q	- 2	+ 3 q	+ 2 q
14	+ 2	-10	- 5	- 9	+ 8	+10	0	- 3	0 q	+ 2	+ 3 q	+ 4 q
15	+ 6	-12	-11	-10	0	+ 3	+ 1	0	0	+ 2	+ 6 q	+ 2 q
16	0	-10	-10	- 6	- 2	+ 2	- 3	- 6	- 1	+ 4	+ 6 q	+ 3 q
17	+ 4	- 6	-10	- 8	+ 1	0	- 2	- 3	+ 6	+ 2	+ 1 q	+ 2 q
18	0	- 4	- 5	- 5	+ 8	+ 2	- 1	- 4	+ 4	- 9	+ 6 q	+ 4 q
19	- 2	- 7	- 5	- 2	0	+ 6	- 2	- 8	- 4	- 7	+ 2 q	- 3 q
20	- 2	- 6	- 4	+ 4	- 1	+ 4	- 4	0	+ 2	- 6	+ 7 q	- 3 q
21	0	- 4	- 4	+ 2	+ 2	+ 1	- 2 t	+ 2	+ 2	+ 1	+ 8 q	0 q
22	- 2	- 6	- 6	0	- 2	- 2	- 2	+ 2	- 4	+ 1	+ 1 q	0 q
23	- 2	- 2	+ 2	+ 2	+ 2	+ 2	- 4	- 4	- 6	+ 2	+ 8 q	+ 2 q
24	- 1	- 2	- 4	+ 6	0	+ 6	+ 2	- 5	0	+ 6	+ 1 q	+ 3 q
25	0 q	- 2	- 4	+ 4	- 5	+ 5	- 5	0	0	+ 1	0 q	- 9 q
26	- 2 q	- 4	- 5	+ 5	+ 2	- 2	-10	+ 2	+ 5	- 2	+ 2 q	- 7 q
27	- 2	- 6	+ 3	+ 5	+ 1	- 2	- 6	0	+ 4	+ 5	- 1 q	- 6 q
28	- 4	- 4	- 6	- 5	0	+ 2	0	- 2	0	+ 4	- 9 q	- 1 q
29	+ 1		- 8	- 2	0	- 8	- 4	- 6	+ 3	+ 6	- 2 q	- 1 q
30	- 4		-11	- 2	- 1	- 6	- 8	- 5	- 2	- 4	- 6 q	- 6 q
31	- 4		- 8		+ 5		- 6	0		- 6		- 2 q

75° west mer. day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1914											
1	+13	0	- 1	+ 5	+ 1	-14	+ 6 t	0	+ 6	- 2 du	- 6	+ 3
2	+10	0	- 6	+11	+ 4	- 8	+10	0	+ 6 du	+ 4	- 2	+ 7
3	+ 4	+ 1	- 4	+ 6	+ 5	- 6	+14	- 9	+ 8	- 1	- 5	+10
4	+ 2	- 2	- 2	+11	+11	- 7 t	+15	- 3 q	+ 4	+ 7	-12	+ 3
5	- 3	- 2	+ 2	+19	+ 8	- 5	-13	0	+ 6	+ 8	- 6	+ 2
6	+ 2	- 6	- 2	-35 du	- 2	+ 4	- 3	-11 q	+ 2	+10	- 6	+ 4
7	- 1	- 4	- 3	- 8	- 4	+ 8 q	- 3	+ 2	+ 6	0	- 5	+ 4
8	- 2	- 3	- 2	-16	- 6	+ 2	+ 2	0 t	+ 8	+ 3	- 3 q	0
9	- 3	+ 6	+ 4	- 5	- 3	+ 1	- 2	+ 2	+ 2	+ 4	+ 4 t	- 4
10	+ 2	+ 3	+ 4	0	0	+ 4	+ 2	+ 3	+ 4	+ 3	+14	+ 2
11	+ 2	0	0	- 4	+ 7	- 2	- 1	+ 6	+ 6	+ 4	-13	+ 4
12	+ 9	+ 6	- 2	- 4	+ 3	+ 6	+ 6	+ 5	0	+ 4	-10	+ 1
13	+ 8	+ 3	0	+ 3	+ 4	+ 4	+ 6	+ 6	+ 7	+ 6	- 2	+ 2
14	+ 4	0	- 3	+ 6	+ 6	+10	+ 6	+ 6	+ 3	+ 6	0	0
15	0	- 4	- 9	+ 5	- 2	+ 8	+ 3	+ 5	+ 4	- 1	- 4	+ 4
16	- 6	0	- 5	- 4	- 4	+ 8	+14	+ 7	+ 2	- 1	+ 6	+ 5
17	- 6	+ 2	+ 2	0	0	+10	+11	+ 8	0	0 t	+ 2	- 6 q
18	- 5	+ 1	0	+ 2	- 8	+10 du	+ 7	+ 2	- 4	0	+ 4	- 3 q
19	- 2 t	0	+ 6	- 2	- 5	+ 9	+ 2	- 4	+ 2	+ 1	+ 1	0
20	- 6 t	+ 2	+ 5	- 2	0	+ 4	- 1	- 6	+ 2	- 1	+ 7	0 t
21	0	+ 2	+ 8	0	0	+ 1	+ 2	0	+ 6	- 1	+ 8	0
22	- 8	0	+ 5	- 2	- 4	- 3	- 2	- 2	+ 8	- 2	+ 8	+ 2
23	- 8	- 1	+ 4	0	0 du	- 2	+ 5	- 2	-12 du	0	+ 8	+ 2
24	- 4	0	- 2	+ 8	+ 3	+ 4 du	+ 4	- 2	- 4	+ 3	+ 8	0
25	- 2	- 1	- 8	0	+ 2	- 6	- 4	- 3	0	+ 7	+12	- 4
26	+ 1	- 2	- 2	- 2 t	- 2	- 6	- 9	- 1	+ 6	+12	+ 2	- 2
27	+ 3	- 2	0	+ 2	- 6	-10	- 5	0	-34	+12	- 6	- 8
28	+ 2	- 7	0	- 2	- 2	- 4	- 5	+ 1	-11	-29	- 1	-17
29	- 2		+ 2	0	0	- 7	-30	- 8	-16	-26	+ 2	-10
30	- 3		+ 4	+ 2	+ 2	- 4	-18	- 3	-13	-14 du	0	- 3 du
31	- 8		+ 1		- 8		-18	- 8		- 6		- 6

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1915						
1	-13	+18	+12	+ 1	- 6 q	+16	+ 2	+ 6 t	+ 5	+ 7	-14	+11
2	- 2	+ 8	+10	+ 4	- 9 q	+18	-14	- 2 t	+ 6	+13	- 3	+12
3	+ 2	+12	+15	- 4	- 2 q	+18	- 4	+ 2	+12	+16	+ 2	+ 7
4	+ 5	+11	+17	- 2	- 1 q	+18	0	- 4	+10	+16	+10	+14
5	- 8	+ 2	+15 du	+ 4	0 q	+22	+14	0 eu	+13	+18	- 1 au	+14
6	- 6	+ 4	+20 du	+12	+ 7 q	+22	0 fu	- 4 eu	+ 6	+22	-37 au	-24
7	- 8	+ 6	- 4	+12	+ 4 q	+32	- 2	- 9 q	+ 7	+24	-12	-20
8	- 2	- 7	-15	+ 6	+ 7 q	+22	+ 1 t	0 q	+16	+21	- 9	-12
9	- 1	-16	-10	- 2	+ 4 q	+15	- 6 t	+ 2	+18	+22	0	- 2
10	+ 2	-11	- 4	+ 6	+10 q	+16	- 3 t	0 du	+11	+16	+ 6	+ 5
11	+ 2	+ 4 eu	+ 4	+ 9	+ 3 q	+20	-14	- 5 du	+ 6	+ 8 du	+ 4	- 8
12	+ 2	+ 4 eu	+ 4	+ 8	+ 7 q	+ 4	-10	- 1	+ 8	+12	+ 4	- 2
13	- 2	+ 6 eu	+ 6	+12	+ 8 q	- 3	- 6	+ 5	+ 2	+19	+10	+ 6
14	- 4	+ 9 q	+ 6	+12	+ 7 q	+ 4	- 2	+ 8	+ 4	+ 3	+13	- 4
15	0	+ 4 q	+ 8	+ 2	+ 2 q	+14	- 2	+12	+ 6	-54	+ 2	-15
16	+ 4	+ 6 q	- 1	-16	+ 1 q	+10	+ 2	+22	+ 6 du	- 7 du	-22	- 8
17	+ 6	+ 4 q	- 6	0	- 8 q	-91 du	+ 6	+ 6	- 8	- 6	-20	- 4
18	+ 4	+ 8 q	+ 3	- 2	- 4 q	-51	+ 7 du	+ 9	+ 1	+ 8	-15	+ 4
19	+ 7	- 9 q	-11	-18	- 1 q	-34	+ 4	+ 4	+ 4	-13	- 6	+ 2
20	+ 6	- 9 q	0	-13	+ 1 q	-29 t	+10	+ 6	+10	-10 du	- 5	+ 7
21	+ 9	- 2 q	-14	- 8	+ 1 q	- 9 q	+14	+ 5	+12	- 2	0	+ 7
22	+ 4	- 2	-18	- 4	- 1 q	-21 du	+ 6	0	-18	-16	- 1	+ 8
23	+ 5	- 4	- 8	- 4	- 3 q	- 9	+ 2	+ 5	-12	-33 du	+ 3	+ 5
24	+ 3	- 8	- 6	+ 2	- 1 q	+ 1	+11	+ 4	-19	-29	+ 8	+ 5
25	- 6	- 4	- 7	0	- 4 q	0	+ 4	- 6 du	-12	-36	+10	- 1
26	- 6	- 6	- 8	-19 du	- 1 q	- 2	0	-24	-16	-15	+12	- 4
27	- 2	+ 1 du	- 2	- 2	-15 q	- 2	-10	-12	-13	-14	+13	- 6
28	- 5	0	- 4	- 2	- 1 q	- 2	- 6	- 8	-28	-10	+12	- 2
29	+ 5		+ 4	0	+ 3 q	- 2	0 t	-12	-20	+ 3	+10	- 1
30	0		-10	+ 6	0 q	- 4	- 8	-14	-26 du	+10	+17	- 2
31	+ 2		- 4		+ 2 q		- 2	-12		+ 3		- 2

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1916						
1	+10	+ 6	+26	- 9	+ 4	- 5	- 5	+29	- 2	- 8	+10 du	-20
2	+14	+ 4	+30	- 3	+ 1	+ 3	+ 8	+ 4	- 3	+ 1	+19	-18 du
3	+14	+ 6	+12 du	0	- 4	+ 4	0	+ 6	-10	+ 7	- 8 eu	-13 du
4	+ 9	+10	+10	+12	+ 8	+ 8	+ 3	+12	-12	+12	-16 eu	- 6 eut
5	0	+ 4	+ 6	+19 du	+ 6	+11	- 2	+12	-16	+ 6	-18 eu	- 1 q
6	+12	0	+ 3 du	+11	+ 1	+ 4	- 2	- 2	- 4	-28	-18 eu	+ 2 eu
7	+ 8	+ 8	+ 5	+10	- 4	0	+ 2	0	0	-32	-13 eu	+ 2 eut
8	+10	0	-15 du	0	- 4	- 6	-10	+ 1	0	-11 q	-12 eu	- 2 eu
9	+13	- 3	-56	+ 5	+ 5	- 5	-22	+ 8	+10	- 8	- 9 du	+ 4 eu
10	+ 9	+ 2	-25	+10	+ 6	+ 2	-10	+ 8	+19	- 7	- 2	- 2 t
11	-20	0	+ 8	+ 6	- 6	+12	- 4	+11	- 3	- 4	- 4	+ 6
12	-22	+ 4	+ 6	+10	- 6	+12	- 6	+16	-14	-10	+ 5	0 t
13	-18	0	+ 9	+14	0	0	- 1	+14	- 5	-23	- 1	+ 4
14	- 6	0	+15	+16	+ 4	+ 6 du	0	+ 4	- 2	-14	- 2	+ 8
15	- 4	+ 3	+12	- 5	+ 6	+ 8	+ 6	+ 8	+ 1	-10	+ 4	- 2 t
16	- 6	+ 8	+12	- 1	+10	+ 8	+11	+17	- 8	- 4	+ 8	- 2
17	0	0	-21	+ 3	+ 4	+15	+ 2	+18	- 8	+ 5	+ 8	- 2
18	+ 5	-12	-11	- 6	+10	+16	+ 4	+23	- 3	+ 6	+ 3	+ 5
19	+ 6	- 6	- 4	+ 8	+ 9	- 4	+ 3	+13	+ 1	+22	+ 4	+ 7
20	- 3	- 4	- 6	+15	+15	-11 du	+ 3	- 2	+10	+14	+ 4	+ 7
21	- 4	+ 3	- 2	+13	-12	- 8	+ 4	+ 6 t	+12	+ 6	+ 2	+ 9
22	- 4	- 8	+ 4	+ 9	-16	-16	+ 8	-10	+14	+ 4	+ 2	+12
23	-19	-10	+10	+ 8	-16	-18	+ 4	-26	+ 8	+ 6	+ 3 eu	+18
24	- 4	- 8	+ 9 du	+12	-14	- 6	- 2	-15	+ 8	+ 8	+ 5 eu	+23
25	- 7	- 1	- 6	-30 du	- 3	+ 7	0	0	+10	+ 6 t	+ 8 eu	+12
26	- 4	+ 4	+ 2 du	-26 du	- 3 du	- 2	0	-15	+ 4	+ 8	+ 8 eu	+10
27	- 4	- 4	+ 6	-15	- 4	- 6	+ 4	-64 du	- 4	+ 8	+ 2 eu	- 3
28	+ 3	- 4	+19	-38	+ 2	- 3	+ 1	-25	+ 2	+11	- 2 eu	- 4
29	+ 1	- 2	-22	-40	+10	- 2	+ 1 du	-20	+ 7	+12 t	- 1 eu	- 4
30	+ 6		-20	-11 du	+ 7	-10	+ 6	-12	- 8	+ 3	-13 eu	- 6
31	+ 2		-18		-22		+ 3	- 8		+ 8		- 6

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1917											
1	+ 7	+ 8 t	+ 5	+ 4	- 5	+ 3 du	+14	+ 8	+19 du	- 1	- 6	+ 2 q
2	+15	+ 3	+11	- 7	-33	+ 6	+17	+22	+ 4	- 6	- 5	0 q
3	+18	+ 8	+19	- 7	-24	+ 3	+ 9	+27 du	-10	-11	+ 1	+ 8 q
4	-63 q	+10	+ 8	- 5	-18	-14	+ 9	+18	- 5	- 8	+ 4	+ 4 q
5	-51	+ 5	-18	-14	-12	0	+ 8	+28	-26	+ 6	+10	+ 1 q
6	-15	+ 6	-12	-10 du	- 5	+14	+10	+33	-28	+ 3	+10	+12 q
7	-13 q	- 2	- 8	- 8	0	+17	+18	+27 du	-11	+ 6	+13	+10 q
8	-12 t	- 4	-22	- 8	+ 6	- 9	+14	+22	- 4	+ 8	+12	- 1 q
9	-10 t	+ 4	- 8	-13	+ 2	+10	+14	-43 du	- 9	+12	+14	+ 3 q
10	- 4	- 2	-10	- 1	+ 4	- 1	+26	-42	- 2	+15	+12	+ 9 q
11	- 2	- 2	+ 2	+12	+ 2	+ 8	+16	0	+ 4	+ 6	+16	+20 q
12	- 4	+ 6	- 4	+ 6	+14	+ 8	+ 2	+14	+ 8	+10	-14	+13 q
13	- 3 t	+ 5 t	-14	+ 4	+ 4	+ 3	-30	+ 6	+ 1	+10	- 6	+ 9 q
14	+ 2 t	+ 6	0	+16	- 2	- 2	-16	-47	+ 5	- 2	-14	+10 q
15	+ 8	-27	- 2	+10	0	- 2	- 8	-36 du	+ 8	0	- 5	+12 q
16	+ 8	-19	- 4	-14	- 7 du	+ 1	- 8	- 4	+ 5	+ 8	+ 1	-46 q
17	+ 4	- 5	- 4	- 6	- 4	+ 6	- 2	+ 1	+ 3	+ 5	+ 1	-37 q
18	+10	-16	- 4	- 2	+ 8	+ 6	0	+ 4	+ 4	+10	0	-25 q
19	+21	-10	+ 4	- 2	+10	+ 4	- 3	+ 6	+ 4	+16	- 8	-15 q
20	+14	- 2	+12	+ 1	+10	+10	+ 6	+24	- 9	+12	-10	- 9 q
21	+ 8	- 1	+ 3	+ 9	+15	+12	- 2	-44	- 4	+14	+ 6	- 4 q
22	0	+ 4	+ 9	+ 9	+13	+21	-20	-32	0	+11 t	+ 8	- 4 q
23	+ 2	- 1	+ 4	+ 6	+12	-10	-16	-18 du	+ 2	+12 q	+15	0 q
24	+ 6	+ 4	+10	+ 9	+14	-31	- 3	+ 2	+ 6	- 2	+ 8	+ 7 q
25	+ 4	+ 3	-10	+22	+16	-24	0 t	+10	+12	-24	- 6	- 2 q
26	+ 6	+ 8	- 2	- 8	+12	- 9	0 q	-20	+12	- 2	-18	- 9 q
27	+ 1	+ 6	- 4	- 4	- 2	- 2	+20	- 5	+ 1	+ 4	-20	- 7 q
28	+ 4	+ 8	+ 4	+ 4	- 4 t	- 9	0	+ 7	+17	-22	-12	+ 4 q
29	+ 3		+10	+ 3	- 8	-13	-28	+11	+ 2 q	-40	- 6	+ 9 q
30	+ 3		+11	- 4	- 6	- 1	-10	+14	-19 q	-29 t	- 2	+10 q
31	- 1		+12		- 1		-37	+17 du		-18		+ 9 q

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1918											
1	+10	-11	+ 8	+15 du	-10	+ 8	+10	+14	+ 2	+ 6	+ 2	-22
2	+16	+ 4	+10	+14	- 4	+10	+13	+ 5	+14	+10	+ 4	+ 4
3	+10	+ 8	+ 2	+12 du	+ 3	+13	+ 1 du	- 2	+ 6 du	+ 6	+ 8	- 1
4	+ 4	+12	+10	- 2	- 2	+17	+ 7	+10	+ 6	+ 4	+16	+ 8
5	0	+ 8	+22	-23	-12	+13 du	+ 8	+ 6	+ 8	+14	+20	+14 du
6	- 2	- 8	+24	-32	+ 8	+10	+ 4	+ 2	+ 6 du	+ 6	+22	+29
7	+ 4	+ 2	0	-20	+11 du	+ 8	+14	+12	+ 8	+15	+23	+ 4
8	+ 7	+14	-63 dut	- 2	+12	+18	- 8	- 1	+ 9	-23	+20	-38
9	+12	+14	-14	- 2	+15	+14	- 3	+ 3	+18	-10	+20	-24
10	+11 t	+ 8	-12	+ 8	+14	-48 du	+ 2	+10	+14	+ 4	+ 6	- 6
11	+ 6	-12	-10	-26	+ 8	-24	-14 du	+ 6	+14	+16	-18	- 7
12	+ 2	-42	-22	-12	+ 8	-27	- 4	+14	+24	+20 t	-18	+ 6
13	-14	-40	- 5	0	+10	-16	+ 5 t	+ 8	+18	+20	- 7	+ 2
14	- 8	-26	+ 2	+ 5	+12	-16	+12	+ 5	+18	+28	- 4	+ 6
15	- 6	- 7	+ 8	+16	+ 6	-12	- 5	- 4 du	+10	+12	-16	+15
16	- 2	- 1	-14	+14	-17 du	-14	+ 1	-31 du	+ 6	-59	-11	+10
17	- 2	+ 2	- 3	+16	-51 du	-12	+ 5	-11	- 8	-40	- 8	+17
18	+ 4	+ 6	+ 1	+ 8	-26	- 6	- 1	0	-14	-12	- 2	+16
19	+ 8	+10	+ 6	-13 q	-14	0	+ 4 du	+ 5 du	-21 du	-19	- 2	0
20	+ 6	+10	+10	+ 4	-14	+ 3	+12	0	-13	-18	+14	+ 1
21	- 1	+ 6	- 5	+15 q	-10	+ 6	+13	+ 1	-52 du	-10	+ 6	+ 4
22	- 1	+10	+ 2	+ 4	0	+10	+13	- 2	-35 du	-10	0	+10
23	+ 3	+ 4	- 4	+ 4	+ 6	+ 5	+12	+ 5	-18 du	- 6	-41	0
24	+ 2	- 8	0	+ 9	+10	+ 4	+10 du	-14	-14	+ 2	-21	+16
25	- 2	+10	+ 6	+ 2	0	+12	- 2	-16 q	- 6	+ 6	- 6	-46
26	+ 4	+12	+12 q	-15	+ 8	+ 4	-17	-10 q	+ 6	+ 8	+ 4	-34
27	+ 1	+14	+ 1 q	0	+12	- 3	- 6	-15	+ 7	+16	+ 6	-18
28	+ 2	- 2	+10	+13 q	+14	+ 8	-28	- 8	+ 7	+ 6	+ 6	- 4
29	- 6		+ 6	+12 q	+ 2 t	+11	-27 du	- 3	- 2	+ 6	0	+ 4
30	-33		+10	-12	+ 2	+ 9	-18	- 4	- 4	+13	-26	+14
31	-31		+ 9		+ 4		-14 t	+ 1		-12		+10

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Table 1-G--Daily mean departures from monthly means in horizontal intensity* (H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1919							
1	+13	-10	- 4	+ 6	+21 du	+13	+28	+24	+22	-30 du	- 8	+13
2	+19	- 6	- 5	+ 4	-25	+14	+23	+28	+16	-34	0	+13
3	- 3	- 1	- 4	+18	-33	+14	+ 4	+18	-14 du	-20	+10	+19
4	-34	- 2	+ 6	0 du	-16	+18	+ 3	+27	+ 2 q	-12	-24 t	+ 4
5	-26	+ 2	+ 6	+10 du	-19	+22	+ 2	+14	+ 3 q	- 6	-23	+ 6
6	-18	0 du	0 du	+ 4 du	-10	+13	+11	+21	-14	-15 t	- 8	+ 9
7	-10	+ 4	- 1	-19	- 2	+ 6	+ 6 du	+17	0	+ 2	+ 2	+14
8	- 5	+ 7	+ 3 du	-12	+ 8 du	+16	- 6	+16	+10	+ 3	+12	+13
9	+ 2	+ 2	+15 du	-10	+18	- 6	0	+20	- 5	+ 2	+ 7	+ 8
10	+ 4	+ 6	+25	- 6	+12	-19	0	+27 du	- 2	+ 4	+10	+18
11	+ 8	+14	+28 du	- 6	+20	-17	+ 4	-82 du	0	+10	- 6 t	+13
12	+16	+28	+12	- 6	+14	-18	- 2	-40 du	+16	+16	-11	+ 6
13	+11 t	+ 4	+14	+12	-17 du	- 4	- 4	-37	+12	+20	+10	+ 9 q
14	- 8 t	- 6	- 4 du	+20	- 4	- 3	+ 2	-18	+ 6	+22	+11	+ 1 q
15	+ 4	- 2	+ 9	+20 t	- 2	- 3	+ 4	-10	+ 4	+10 du	+12	-44
16	-14	- 2	- 3	- 6	+ 2	+ 1	+ 8	- 2	+ 3	-10	+ 2	-24
17	-16	+ 7	-10	-23 du	0	- 4	-14	- 3	+10	-12	-15	- 7
18	-17 t	+ 4	+ 7 du	-20	- 4	- 3	-16	+ 2	+ 5	- 1	- 8	- 2
19	-11	+ 6	-10	-12	+ 2	- 2	-14	-22	-57 du	+ 8	0	- 7
20	- 6	+18	-35	-13	- 3	+ 9	- 6	-10	-40	+16	+ 8	- 4
21	- 2	-16	-28	-16	+10	+ 2	0	- 2	-20	+22	+ 8	-10
22	0	-15	-26	-11 du	0	- 2	- 4	- 4	- 5	+12	- 7	-12
23	+ 6	-16	- 8	- 2	-10 du	-23	-26	- 2	+ 8	-22	- 9	-14
24	+ 8	- 7	- 8	+ 8 du	-21	-16	-17	+11	- 8	+ 4	- 2	-13
25	+ 8 t	- 6	- 1 du	+10	0	0	-10	+ 6	+ 1	+10	+ 2	- 6
26	+16	+ 5	+12 du	+ 8	-11	-12	- 1	-12	0	+ 9	- 4	- 2
27	+20	- 2	+10	+10	0	+ 5	+ 1	+ 1	+ 2	- 6	+ 4	0
28	+14	-24	- 7	+14	+ 9	+10	+ 2	+ 8	+12	- 5	+ 2	0
29	+ 6		- 1	+ 4	+12	- 6	+ 2	+ 8	+ 8	- 2	+12	+ 2
30	+ 8		- 6	+ 6	+24 du	0	+ 4	+ 7	+17	+ 2	+ 6	+ 4
31	+10		+ 3 du		+22		+ 4	+ 8		- 7		+10

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1920							
1	+12	+ 5	+27	+10	-23 du	+ 9	+ 5	+12	+12	-26 q	- 2	+ 6
2	+ 2	+ 5	+35 du	+14	- 9	+ 2	+10	+16	+18	-13 q	- 9	+ 1
3	+ 2	+ 4	+41 du	+10	-12	+ 4	+12	+20	- 3	-10	- 4	- 4
4	+ 6	+12	+ 2	+15	- 8 t	+ 4	+12	+ 4	- 1	- 8	- 2 t	- 3
5	+ 6	+12	-42	- 8	- 1	+ 6	+16	+ 6	+ 6	0	- 6	- 4
6	+ 8	+17	+ 5	- 2	+ 4	- 6	+ 3	+11	+12	- 8	-20	-10
7	- 2	+ 4	+ 8 du	+ 2	+ 4	0	- 2	+16	+20	- 8	- 6	- 2
8	+10	+ 4	+ 9	+ 2	+19	+ 6	- 7	0	+ 2	- 1	+ 2	- 6
9	+ 2	+ 4	+ 3 q	+ 4	-10	+11	- 5	- 2	- 8	+11	0	- 6
10	-14	+ 2	+14 q	+ 4	- 4	-34	+ 3	- 2	- 2	-22	+ 2 du	0
11	- 7	+12	+19 du	+ 8	+ 8	-16	+16	+ 4	+ 5	- 2	+10	+ 6
12	- 8	+ 7	+19	+18	+ 8	-12	- 2	- 5	+10	- 2	+14	+16
13	- 2	+ 5	+25 du	+22	+ 4	-11	0	-18	+10	+ 5	0	+ 4
14	+ 8	0	+17	+15	-17	- 5	+ 2	-16	+ 9 du	+ 4	+ 9	0
15	+ 2	+ 4	+ 5	-31	-20	+ 6	- 2	+ 2	+ 4	- 1	+ 8	0
16	- 3	-18	+ 8	-12	-16	+ 4	-14	- 2	+ 3	+ 8	+ 6	+ 2
17	- 8	-17	+22 du	-23	-12	+ 3	0	+ 5	+ 4	+ 4	- 4	+ 6
18	- 5	-10	+23	-28	-11	+ 2	-15	+ 2	+ 3	+ 2	- 3	+ 7
19	- 2	- 6	+23	-24	+ 8	+ 7	- 6	- 6	+ 7	- 1	+ 3	+ 6
20	+ 6	- 3	+24 du	-31 du	+14	- 2	- 5	- 6	+ 6	+14	+ 7	+16
21	-10	+ 1	+27	- 6	+ 8	+ 6	+ 2	-22	+10	+19	+ 2	+ 8
22	- 7	+ 4	-101 n	+ 4	+10	0	- 2	-22	- 5 du	+19 q	- 2	+12
23	- 4	+12	-120 r	- 4	+14	+ 3	- 2	-12	- 4	+10 q	+ 6	+14
24	- 3	-20	-53	- 7	+12	- 6	- 9	- 5	- 2	- 2	+10	+12
25	- 3	-17	-33	+ 3	+ 2	- 2	- 4	+ 2	+11	0	+10	0
26	0	-10	- 9	+16	+13	+ 1	- 6	+12	+16	- 6	-12	-38
27	+ 4	-12	- 7	+16	+ 6	+ 4	- 6	+ 8	+ 6	- 4	-13	-22
28	+ 4	- 4	- 5	+16	+ 7	+ 8	- 2	+10	-55 du	- 5	- 5	-12
29	+10	- 2	- 1	+13	- 8	0	+ 6	+ 8	-54 du	- 2	- 2	- 7
30	- 4		+ 6	- 5	- 4	+ 4	+ 6	-13	-33 du	+ 8	0	+ 2
31	- 6		+11		+ 3		+ 3	- 6		+ 7		- 8

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1921						
1	- 9	- 2	+ 8	+ 6 du	+24	+ 9 q	+ 5	+12 t	- 7	- 1	+ 7	+14
2	- 6	- 7	+ 5	+ 6	+30	- 1 q	+ 5	+12	-36	+ 9	+ 8	+ 6
3	+ 1	- 2	+10	+10	+30	+16 q	+ 4	-11	-10	+12 t	+14	+ 2
4	-10	+ 6	+10	+ 8	+16 du	-10 q	0	- 8	-22	+ 8	+12	+ 5
5	- 8	-14	+10	+12	+31 du	0 q	+ 4	-12	-16	+ 3	- 2	+ 9
6	- 3	- 7	+10	+10	+32	- 6 q	+12	- 2	-10	+ 8	-20	+11
7	+ 2	- 6	+ 8	+16	+40	- 8 q	+ 7	- 2	- 4	0	- 4	+14
8	+ 2	+ 1	+12	+ 8 t	+31	- 7 q	- 3	0	- 4	-34	- 2	+ 8
9	0	+ 4	+ 9	+ 1	+27	- 8 q	- 1	0	+ 4	-13 du	0	+10
10	- 4	+ 2	- 3	-12	+32	- 8 q	- 4	+ 3	0	- 4	- 4	+10
11	+ 1	+ 2	+10	+ 9	+41	- 3 q	+ 2	+ 1	+ 5	-26	+ 4	+12
12	0	+10	+12	+22	+14	- 3 q	+ 2 t	+ 1	+10	-15	+12	-11
13	+ 3	0	+15	-14	+ 1 r	+ 8 q	- 5	0	+10	- 6	+ 6	-14
14	+ 5	-10	+ 3	-15 du	-16 r	+ 2 q	- 5	+ 6	+16	+ 1	+ 2	- 6
15	+ 8	- 2	-12	-16	-164 p	- 4 q	0	- 4	- 1	0	+ 4	0
16	+ 2	+ 2	-11	-24	-120 p	+ 4 q	-14	- 4	+ 6	+ 2	-14	-11
17	-12 t	0	- 1	- 6 du	-36	-10 q	- 4	- 7	+12	+ 2	-23	-11
18	- 2	+ 4	0	+14	-27	0 q	- 5	- 6	+ 6	+10	-12	- 2
19	+10	+ 9	+ 1	+ 5	-21 du	+ 8 q	+ 2	+ 4	+ 6	+ 4	- 9	+ 2
20	+ 4	+ 2	+ 8	- 8	-18	+ 4 q	- 1	+ 3	+ 6 du	+12	- 6	+ 7
21	- 2	- 7	- 2	-14	-14	+ 2 q	+ 3	+ 8	+ 2	- 2	- 9	+ 6
22	+ 2	- 6	-28	- 8	- 6	0 q	- 4	+ 2	+ 4	0	0	- 2
23	+ 2	+ 2	- 6	- 9	-12	+ 8 q	- 2	+ 8	- 2	+ 2	- 6	- 8
24	+ 2	+ 8	- 3	- 3	+ 4	0 q	0	+ 8	+ 3	+ 4	- 4	-12
25	+ 2	0	-12	- 4	+ 8	+ 4 q	+ 4	+10	+12	+ 6	+ 2 t	- 1
26	+ 8	+ 5	-14	+ 1	+12	- 1 q	+ 9 du	+ 2	+15	+ 7	+ 4 q	- 3
27	+ 6	+ 2	-14	+ 8	+14	+ 6 q	+ 9	- 4	+16	+ 6	+ 5	+ 7
28	+ 1 du	+ 2	- 7	+14	+10	+ 1 q	+ 2	+ 6	+ 4	- 1	+ 4	-20
29	+ 1		-12	-18	+12	+ 2 q	- 8	+ 4	-12	+ 5	+15	-16
30	0		- 2	- 7 du	+12	- 1 q	- 6	- 8	- 2	+ 6	+14	- 8
31	- 1		+ 1		+13		- 4	-17		- 6		- 4

75° west mer. day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1922						
1	+ 6	- 8	+ 2	- 1	+ 6	+23	- 3 q	+ 2 q	+10	+ 9	-14	- 6
2	+10	0	+ 2	+ 2	+ 4	0	- 3 q	+ 1 q	+10	+10	-11	- 4
3	+12	+ 2	+ 2	+ 6	+10	- 6	- 4 q	0 q	+ 8	+ 2	-11	- 4
4	+14	- 4	+ 2	+10	+14	+ 1	+ 2 q	+ 4 q	+ 6 q	+ 1 du	- 8	+ 1
5	+10	+ 4	-20	+12	+10	- 4	+ 4 q	- 2 q	+10 q	-30	- 8	+ 4
6	+ 8	+ 2	- 6	+11	+ 2	- 5	0 q	+ 2 q	+ 6 q	-15	- 3	- 2
7	- 2	+ 9	+ 6	+18	-19	- 1	+ 2 q	+ 7 q	- 9	-11	0	+ 1
8	-10	+ 4	+ 6	0	-27	0	+ 2 q	+ 8 q	- 2	-12	+ 1	0
9	-13	-11	+10	- 8	-15	- 4	+ 8 q	- 3 q	- 3	- 8	+ 6	+ 4
10	- 6	- 1	+ 4	- 8	-15	0	+ 6 q	- 3 q	- 6	- 4	- 1	0
11	- 4	+10	0	-10	-11	+ 7	+ 3 q	- 6 q	+ 8	+ 2	- 1	+ 2
12	0	- 2	- 4	-10	- 4	+ 6	+ 3 q	- 4 q	+ 7	0	- 1	- 4
13	+ 3	- 2	-22 du	- 6	- 6	- 1	+ 9 q	- 7 q	0	+ 6	+ 5	+ 1
14	+ 4	+ 2	-29	- 4	- 1	- 1	+ 3 q	- 3 q	-51	0	+ 8	+ 3
15	+ 6	-19	- 2	+ 4	+ 2	- 1	- 2 q	- 3 q	-22	+ 6	+ 7	- 4
16	- 5	-20	+ 8	+ 4	- 6	+ 7	- 2 q	+ 3 q	- 1	+ 5	+ 6	0
17	- 5	-16	- 6	+ 3	- 6	- 4	- 1 q	+ 3 q	- 2 q	+ 4	+ 4	+ 1
18	- 5	- 8	- 2	0	0	- 6	+ 3 q	+12 q	+ 4 q	+ 5	+ 5	+ 7
19	- 4	+ 3	- 3	+ 4	- 7	- 2	+ 4 q	+ 7 q	+ 4	+ 6	+ 4	+ 5
20	0	+ 8	- 4	+11	+ 6	+ 4	0 q	- 1 q	+ 6	- 2	+ 8	+ 8
21	+ 2	+ 6	+ 5	- 8	+ 1	0	+ 4 q	- 1 q	- 4 t	+ 4	+ 6	+ 4
22	+ 6	+ 6	+14 q	- 9	+ 3	- 3	+ 2 q	- 4 q	+ 6	+ 6	+ 4	+ 2
23	0	+10	+11 q	- 2	+ 3	+ 4	+ 6 q	- 8 q	+ 4	+ 4	+ 3	+ 6
24	-12	+ 6	+14	0	0	+ 1	+ 3 q	- 2 q	0	+ 6	+ 2	+ 6
25	-16	+12	- 5	- 6	+ 2	+ 8	+ 3 q	- 4 q	+ 4	0	+ 6	+ 4
26	- 5	+ 3	0	- 8	+ 9	+ 9	+ 2 q	0 q	+10	+ 2	+10	- 9
27	+ 1	- 2	+ 7	- 6	+ 2	- 4	-11 q	- 2 q	+ 5	+ 4	+ 2	- 3
28	+ 2	+ 6	+16	- 4	+ 2	+ 2	-12 q	- 3 q	- 4	+ 4	-10	- 3
29	+ 4		+ 8	+ 4	+10	- 8	- 9 q	- 4 q	+ 2	+ 7	-18	- 5
30	+10		- 2	+ 1	+ 8	-15	- 7 q	- 1 q	+ 2 t	- 2	-10	-12
31	-12		- 3		+11		0 q	0 q		-19		- 6

* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1923											
1	+ 7	+ 2	- 2	- 3	+10	- 1	- 9	+11	+ 6	+ 4	+ 4 du	0
2	+ 6	+ 4	- 4	0	+ 9 du	+ 4	-12	+ 6	+14	+ 9	-16	+ 3
3	+ 6	- 6	0	+ 5	+ 8	+11	+ 2	+ 2	+10	+11	-10	+ 8
4	0	- 8	- 2	+ 3	0	+ 5	0	- 6	+ 6	+ 6	- 6	0
5	0	+ 3	+ 2	+ 8	- 1	- 7	+ 4	0	+ 8	+10 t	- 1	- 3
6	- 1 t	+ 7	+10	+ 4	+ 1 q	0	+11	- 5	+ 6	+ 8	+ 3	+ 4
7	- 3	- 1	+ 7	+ 4 t	+ 4	0	- 7	- 3	+ 6	+ 4	0	+ 6
8	0	+ 4	+ 8 t	+ 3	+ 2	0	0	+ 2	+11	+ 3	+ 2	+10
9	+ 6	+ 4	+10	+ 2	+ 4	+ 2	+ 9	+ 4	+ 6	+ 3	+ 3	0
10	- 4	0	+12	+ 4	+ 2	+ 2	+ 2	+ 2	- 3 t	+14	+10	- 6
11	- 2	+ 2	+14	+ 6	+ 6	+14	- 6	+ 2	- 2	+ 4	+10 t	0
12	0	+ 6	+14	- 3	+ 7	+10	- 2	+ 4	0	+ 3	0	+ 2
13	0	+ 6	+ 8	- 8	+ 8	-14	- 4	+ 6	+ 9	+ 4	- 4	0
14	- 6	+ 8	+ 8	- 4	+ 5	-10	0	- 4	- 2	+ 6	- 6	- 1
15	+ 8	+10	+10	- 2	0	-10	+ 2 t	- 5	+ 4	-24	0	+ 2
16	+ 3	+ 8	+ 2	+ 2	+ 9	- 6	+ 4	- 3	- 2	-48 du	0	+ 1
17	+ 9	+ 4	+ 4	0	- 4	- 2	+ 3	- 1	+ 2	-24	+ 5	+ 5
18	+ 8	- 2	+ 3	+ 2	-10	+ 2	+ 8	+ 2	+ 5	-12	+ 8	+10
19	+ 4 t	+ 1 du	+ 6	+ 2 t	- 9	+ 2	+ 2	+ 2	+ 8	- 4	+ 4	+ 7
20	+ 4 t	+ 4	+11	+ 3	- 4	0	0	- 2	+10	- 5	+ 4	+ 6
21	- 6	0	- 4	- 9 q	- 6	0	0	- 2	+ 8	0	+12	+ 4
22	- 9	0	+ 4	-12 q	- 5	- 3	+10	0	+ 8	- 2	+ 4	+ 3
23	- 4	+ 5	+12 t	-10	- 2	+ 1	-11	+ 2	+ 4	+ 4	- 3	+ 2
24	- 8	+12	-24 t	- 4	0	+ 4	- 6 q	0	0	+ 2	- 1	- 6
25	- 6	-16	-26	- 8	+ 4	+ 5	- 1	0	+ 6	+ 6	0	-11
26	- 4	-12	-17	0	+ 1	+13	0	+ 4	-23	+ 4	0	-12
27	0	-26	-16	- 2	+ 2	- 2	- 3	- 6	-52	0	0	- 8
28	- 2	-17	- 8	- 1	0	- 4	- 2	- 4	-30	+ 1	- 4	-12
29	0		-12	+ 4	-11	- 2 t	0	0	-14	0	- 8	- 4
30	- 6		-10	+ 2	-17	-17	+ 4	+ 5	-10	+ 4	- 7	- 2
31	- 5		- 9		-12		+ 4	- 2		+ 6		- 3

75° west mer. day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1924											
1	+ 4	- 6	+ 6	- 8 q	0 q	+ 8	+ 2	+ 2	- 2	+ 4	0 q	+ 2 q
2	+13	- 2	+ 2	0 q	+ 6	+10	- 2	+ 6	+ 4	+ 6	- 8 q	0 q
3	0	+ 6	- 1	+ 1 q	+ 8	+10	+ 3	+ 8	+ 4	+ 8	+ 2 q	+ 3 q
4	+ 1	+ 6	- 3	0 q	+ 8	+11	+ 3	+ 6	+18	+ 1	+ 4 q	+ 7 q
5	+ 6	- 2	- 4	+ 2 q	+ 6	+ 8	+12	+ 5	- 2	0	+ 8 q	+ 8 q
6	+ 8	-14	- 8	+ 5 q	+10	+14	+ 9	0	-11	+ 4	+ 7 q	+13 q
7	+ 6	- 6	- 8	- 1 q	+10	+14	+ 4	+ 4	0	+ 6	- 2 q	+ 6 q
8	+10	- 5	- 4	- 8 q	+ 7	+14	- 1	+ 6	-14	- 2	+ 7 q	+ 1 q
9	+ 8	- 2	- 9	- 1 q	+12	+20	+ 4 du	+ 1	-10	+ 2	+ 4 q	+ 6 q
10	- 1	+ 2	- 2	+ 3 q	+12	-46	0	+ 2	-10	+ 8	- 4 q	+ 3 q
11	- 6	- 2	0	+ 2 q	+11	-21	0	- 2	- 2	+ 3	+ 2 q	- 2 q
12	+ 3	+ 2	+ 4	+ 7 q	+12	-10	+ 6	+ 5	- 6	+ 6	+ 2 q	- 2 q
13	+ 6	- 2	+ 4 t	+ 6 q	+ 9	-11	+ 3	+ 7	- 1	+ 4	- 7 q	- 8 q
14	+ 8	+ 5	+ 6 t	+ 7 q	+13	- 4	+10	+ 4	+ 6	+ 6	- 1 q	- 2 q
15	+ 6	+ 4	+ 8	0 q	+12	+ 2	0	+ 9	+ 2	+16	0 q	0 q
16	- 4	+ 6	+ 4	+ 7 q	+12	+ 4	- 2	+ 9	+ 6	+ 9	+ 1 q	- 4 q
17	+ 1	+ 1	0	+ 6 q	+ 6	+ 5	- 8	0	+ 8	- 2	0 q	+ 1 q
18	+ 2	+10	+ 6	+ 4 q	+ 9	+ 2	0	-14	+10	- 2	+11 q	+ 4 q
19	+ 6	+ 7	+ 4	+ 3 q	+12	-14	- 1	-12	+ 6	+ 1	+ 2 q	+ 1 q
20	+ 8	0	- 4	- 1 q	+ 6	-20	+ 4	-10	+10	+ 6	- 1 q	- 9 q
21	+12	- 5	+ 1 t	+ 9 q	+ 3 du	- 8	- 6	- 7	+14	- 1	- 1 q	-11 q
22	0	0	0 t	+ 2 q	-50 du	- 8	- 2	+ 2	+10	- 5	+ 4 q	- 1 q
23	-10	- 4	- 4 t	+ 1 q	-33	- 7 t	- 2	0	- 6	-17	+ 6 q	- 3 q
24	- 4	- 2	0 t	+ 2 q	-23	- 4 t	+ 4	+ 2	-15	-32	-24 q	- 7 q
25	0	0	- 3	+ 2 q	-15	+ 2 t	0	+ 2	- 8	-17 du	-20 q	0 q
26	- 4	+ 2	+ 2	-13 q	-12	+ 6 t	+ 1	+ 2	- 2	- 6	0 q	- 2 q
27	+ 1	+ 4	+ 2	-11 q	-16	+ 7	-16	- 4	- 2	- 8	+ 4 q	- 3 q
28	+ 4	- 2	+ 4	-10 q	-24	+ 3	-11	0	- 4	- 4	+ 9 q	0 q
29	-27 du	+ 2	+ 8	- 8 q	-10	+ 4	- 6	-19	- 2	- 3	- 6 q	0 q
30	-34		-10	- 1 q	- 9	+ 4	- 4	- 8	0	0	+ 1 q	0 q
31	-18		-13		+ 2		- 1	- 7		+ 6		+ 6 q

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced **interpolated values of either San Juan or Cheltenham**; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1925											
1	+ 3	+13	0	+ 9	+ 6	- 1	+ 4	+ 6	+ 9	+21	- 8	+15
2	+ 8	+ 8	+ 1	+ 2	+ 8	+ 6	+ 2	+11	-10	+13	-11	+16
3	+10	+ 8	+ 7	- 8	+20	+ 4	- 2	+16	- 1	+13	- 2	+19
4	+ 4	+12	+ 9	+ 3	-26	+ 4	0	- 1	+ 8	+ 6	0	+18
5	+ 3	+ 8	- 2	- 3	-10	+ 8	+ 4	+ 3	+ 8	+ 4	+ 6	+ 6
6	+ 8	+ 1	- 3	- 1	- 6	+10	+ 3	+13	+14	+16	+ 9	-13
7	+ 6	+ 6	+ 1	- 4	- 4	+ 2	+ 3	- 9	+ 2	+18	+ 8	- 9
8	+11	- 6	+ 9	- 3	- 2	+ 6	+ 7	- 8	+14	+ 2	- 9	- 2
9	+10	-16	- 4	- 4	- 8	+ 6	+11	- 8	+ 9	-19	-43	+ 4
10	+ 9	- 6	- 9	- 9	- 4	+ 6	- 3	- 4	+13	- 7	-40	- 2
11	+ 9	- 6	- 2	- 3	- 6	+ 2	- 7	+ 2	+16	- 4	-12	+ 2
12	+ 7	- 1	- 6	- 4	- 4	0	- 6	+ 4	+25	- 3	- 4	+ 4
13	+ 1	- 2	- 2	+ 1	0	-12	- 1	+ 2	+21	0	- 6	+ 2
14	- 2	- 4	+ 1	0	+ 9	- 8	- 2	+11	-16	+ 1	-14	+ 3
15	- 1	0	- 3	+ 3	+ 6	- 2	- 9	+11	-20	- 2	-16	-12
16	- 3	- 1	- 7	- 3	+ 6	- 2	+ 1	+12	- 9	+10	-10	- 7
17	-20	- 3	- 9	+ 3	+11	- 2	+ 3	+ 4	- 7	+ 6	- 2	+ 9
18	-12	0	- 1	0	+ 1	- 4	+ 8	- 4	- 1	+ 8	- 1	+ 4
19	-31	-14	+ 1	+ 2	-11	+ 3	+ 4	- 7	+ 7	+ 7	+ 1	- 2
20	-20	- 8	- 3	- 2	- 3	+ 7	- 1	- 4	+12	+ 9	+ 7	- 8
21	- 3	- 3	+ 4	- 9	+ 7	+ 9	+ 9	0	-38	-26	+11	- 2
22	- 4	+ 4	+ 4	+ 7	+ 6	+20	- 1	-20	-15	- 9	+14	+ 7
23	+ 1	+ 6	0	+ 3	+ 6	+ 1	+ 1	- 1	- 7	-44	+12	+ 8
24	- 8	+ 3	+ 1	+ 4	+ 7	- 6	0	- 8	-38	-33	+18	+ 2
25	- 3	- 7	- 3	+10	+ 3	-15	+ 4	- 2	- 9	-12	+11	+14
26	+ 1	+ 3	- 1	+ 2	+13	- 7	- 8	- 2	+ 3	- 4	+10	+10
27	- 2	+ 1	- 3	+ 8	+ 2	- 2	-13	- 4	- 1	+ 3	+14	- 8
28	0	+ 1	+ 1	+ 3	-10	-10	- 7	+ 9	+ 4	0	+15	-40
29	+ 4		- 2	0	0	- 7	- 2	+ 2	+ 8	+10	+12	-21
30	+ 7		+ 3	+ 3	- 1	- 2	+ 2	- 6	+ 7	+12	+14	- 3
31	+ 7		+ 4		-12		- 1	- 7		+ 6		- 6

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1926											
1	+ 4	+ 4	+ 8	+16 q	+14 q	- 2 q	+17	-19	+22	+25	-10	- 8 t
2	+ 4	+ 4	+ 2	+12 q	+18	-47 q	+14 t	- 8 t	+28	+24	- 9 t	0
3	+20	- 2	+ 4	+13 q	+22	-22 q	- 3	- 6	+26	+22	-17 du	+ 2
4	+15	+ 2	+10	+21 q	-16	-14 q	- 2	+ 1	+30	+ 5	-10 du	+ 2
5	+12	+ 6	-34	+26 q	-24 t	- 4 q	+ 1 du	- 2	+28	+ 9	- 3	- 2
6	+14	+ 8	-22	- 2 q	-20	+ 1 q	- 4	+ 4	+26	+14	+ 2	+ 6
7	+10	+15	-10	+ 2 q	-12	-12 q	- 2	- 1 t	+16	- 6	+ 3	0
8	+16	+18	+12	+ 6 q	-10 t	-21 q	- 4	+10	-12	+ 8	+ 2	+ 2
9	+16	+26	- 5	+ 3 q	-14	-18 q	0 t	+ 6	-10	+10	+ 1	+10
10	+13 q	+15	-22	+ 4 q	-32	-10 q	- 1	- 2	0	+14	0	+16
11	+27	- 2	-10	+ 7 q	-14	+ 2 q	- 2	0 t	+10	+26	+ 6	+ 8
12	+23	+ 4	- 4	+ 3 q	-10	+ 7 q	- 2	- 2 q	+14 du	+24	+ 4	+ 6
13	-10	+ 5	- 5	+ 8 q	- 8	+ 1 q	+ 6	- 8 q	+11 dut	+21	+ 3	+ 4
14	- 6	+ 3	+ 7 du	-23 q	+ 2	+ 7 q	+ 2	- 7	- 3 du	-28	+ 6 q	+ 8
15	- 5	+ 1	+14 du	-138 q	+ 4	+18 q	+ 8 t	+ 2	-32	-48 q	+ 4 q	- 4
16	- 6	+ 6	+ 5	-34 q	+ 4 du	+ 8 q	+10	+ 4	-18	-72	+ 7	-21 du
17	+12	+14	+ 9	-15 q	+ 5	+15 q	+ 2	- 4	0	-34	+10	+ 5
18	+ 6	- 6	-16	- 3 q	+10	- 1 q	- 6	- 2	- 5	-23	+10	+ 5
19	0	+ 6	+ 4	0 q	+14	+ 8 q	0	- 5 du	-13	-18	+ 9	+ 4
20	+ 6	+11	-10	+ 8 q	0	+ 1 q	+ 1	0	-34	-10	+10	- 8
21	+12	+13	- 7	+ 8 q	+ 1	+14 q	- 2	+ 2 t	-65 du	- 1 t	+ 6	-10
22	-11	+ 6	+10 q	0 q	+ 8	+10 q	+ 2	+ 2 q	-33 du	- 2	- 4 t	- 1
23	-12	- 8	+18 q	+ 2 q	+ 8	+ 3 q	0	+12 q	-19 du	+ 4 t	0	-21
24	0	-96 du	+13 q	+ 2 q	+10	+ 2 q	+12	+ 2	- 6 du	+ 8	- 2 t	-20
25	+10	-28	+14 q	+ 8 q	+ 4 t	+ 2 q	+10	0	- 7	-26	+ 4	- 8 du
26	-38	-20	+21 q	+ 6 q	+ 6	+ 7 q	+ 6 t	- 4	- 2	- 6	+12	+ 2
27	-64	- 5	+19 q	+16 q	+10	+19 q	- 8	+ 4	+ 4 du	- 2	+10	- 1 du
28	-30	+ 4	+11 q	+15 q	+14 du	+14 q	-30	0	+12 du	+ 9	+29 q	- 3 du
29	-14 t		+12 q	+18 q	+15 q	- 2 q	-12	+ 8	+14	+ 8	+31 q	- 2 du
30	-12		+ 7 q	+18 q	+12 q	+ 3 q	+ 2	+ 5	+13	+ 6	-18	+ 4
31	- 2		+14 q		+13 q		-22	+ 6		+ 4		+ 6

* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west	Month											
mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1927											
1	+ 8 q	+ 5	- 4	- 2	+ 6 du	- 2 du	+13 q	- 1 q	- 3 q	+11 q	- 1 q	- 2 q
2	+ 6 q	+ 8	+10	+ 4	+ 9	- 4 t	+11 q	- 3 q	+11 q	+ 6 q	- 2 q	+ 2 q
3	+12 q	+ 5	+ 8	+ 8	-12	- 5	+ 3 q	+ 2 q	+10 q	+11 q	0 q	+ 8 q
4	- 2	- 2	+10	+10	-15	+ 4	+12 q	+ 9 q	- 7 q	+10 q	+ 2 q	+12 q
5	+ 7	+ 7 q	+16	+ 2	-39	- 6	+16 q	+ 8 q	+ 1 q	+16 q	+ 6 q	+12 q
6	+ 6	+ 4 q	+ 8	+ 1	-14	-12	+13 q	+ 7 q	+16 q	+11 q	+ 9 q	+ 3 q
7	-50 t	+12	+ 8	- 7	-18	- 6	+10 q	+12 q	- 2 q	-21 q	+10 q	+ 2 q
8	-28	+10	+ 6	- 8	-14	- 3 t	+ 3 q	+ 8 q	- 1 q	+ 6 q	+10 q	- 1 q
9	-10	-17	-20	-15 du	-16	0	+ 7 q	+ 7 q	-10 q	+10 q	+12 q	+ 1 q
10	+ 2	-16	- 4	+ 2	- 4	+ 6 q	+ 6 q	+ 4 q	-14 q	+ 6 q	+ 7 q	+ 2 q
11	- 4	- 6	0	-18	+ 2	+ 1 q	+12 q	+10 q	-10 q	0 q	- 1 q	+ 4 q
12	- 8	- 6	+ 6	- 5	+ 8	-11	+ 8 q	+ 9 q	+ 1 q	-65 q	- 8 q	+13 q
13	- 4	- 9	+ 2	+12	+ 6	- 6	+ 8 q	+ 9 q	- 2 q	-35 q	- 3 q	-28 q
14	- 2	+ 2	+ 4	-45 du	+13	- 7	+ 4 q	+14 q	- 4 q	-13 q	+ 3 q	-11 q
15	0	+ 6	- 4	-21	+ 4	+ 3 t	+ 6 q	+19 q	- 2 q	- 2 q	+ 3 q	-19 q
16	+ 4	- 1	-38	-11	0	+ 2	+ 8 q	+15 q	+ 1 q	+ 3 q	+ 8 q	-10 q
17	+ 8	- 3	-29	+ 2	+ 6	- 2 t	+ 2 q	+11 q	- 3 q	+ 7 q	+ 8 q	- 3 q
18	0	0	-15 t	+ 8	+11	- 2 dut	+ 1 q	+13 q	- 1 q	+10 q	-18 q	-32 q
19	+ 3	+ 3	+ 1 du	+ 7	- 2	- 1	+ 8 q	+19 q	- 2 q	+21 q	-19 q	-14 q
20	+ 1	+ 3	- 8	+12	- 8	+ 1	+ 7 q	-20 q	0 q	+20 q	- 7 q	+ 1 q
21	+ 4	+ 6	0	+15 du	0	+10	+21 q	-40 q	+ 4 q	+22 q	- 6 q	+ 6 q
22	+ 8	+ 8	+ 4	+20	+ 2	+ 4 eu	-58 q	-23 q	+ 7 q	-16 q	- 6 q	+13 q
23	+10	+14	+ 7	+14	+10	0 eu	-31 q	-15 q	+11 q	-29 q	- 1 q	+ 6 q
24	+27	- 5	+14	-16	+ 6	+ 1 eut	-20 q	- 8 q	+11 q	-18 q	- 2 q	+11 q
25	+ 4	- 9	+26	0	+12	+ 3 eu	-15 q	- 1 q	+ 8 q	- 8 q	+ 2 q	+10 q
26	-10	- 8	- 6 du	+ 4	+14	+ 2 eu	-10 q	- 3 q	- 2 q	- 2 q	+12 q	+ 9 q
27	- 1	- 2	- 5	+12	+20	-11 eu	-13 q	+ 6 q	0 q	+ 4 q	+ 4 q	+ 6 q
28	+ 2	-10	- 8	+14	+ 2	- 8 eut	- 7 q	0 q	- 2 q	+ 9 q	+ 6 q	- 2 q
29	+ 8		+ 2	+17 du	0	- 6 eu	- 7 q	-15 q	- 4 q	+11 q	-10 q	-10 q
30	+ 2		+ 6	+ 2 du	+ 6	+ 7 du	-10 q	-26 q	-10 q	+ 6 q	-14 q	- 1 q
31	+ 3		+ 7		+ 8		- 8 q	-13 q		+10 q		+ 7 q

75° west	Month											
mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1928											
1	- 2 q	+ 4	+10	+ 8	+32 du	- 2	+24	+ 6	- 1 q	+23 t	+ 5	+ 2
2	- 4 q	- 2	+10	+ 2	+29 du	+ 7	+32	+ 8	- 3 q	+ 9 du	-22 du	+ 6
3	+ 4 q	- 3	+12	- 9	+22 du	- 2	+21	+ 8	- 8 q	+14	-26	+ 8 t
4	+ 8 q	+ 4	+10 q	- 9	+21	- 2	+18	+ 4	+ 2 q	+18 t	-10 q	+10
5	+ 3 q	+ 4	+19 q	- 7	+15 du	+ 4	+20	-14 dut	+ 4 q	+ 6 q	- 7 q	+ 6
6	+ 1 q	+ 8	+14	- 4	+ 8	0	+22	-10 q	+16 q	+ 4 q	- 2 q	-24
7	+ 2 q	+ 4	+ 6	- 6	+ 7	- 4	+15 fu	- 7 q	- 9 q	+ 3 q	+ 7 q	- 6 q
8	+ 3 q	0	+ 6	-11	+ 3	+ 1	-84 fu	- 2 q	-16 q	+ 7 q	+10	+ 2 q
9	+ 2 q	+ 3	+ 8	- 6	+ 8 du	0	-29 du	0 q	-12 q	+18 q	+16	- 4
10	+ 1 q	+ 7	+ 9	0	- 1	- 3	-21 q	+ 3 q	- 1 q	+12 q	- 4	0
11	+ 6 q	+ 1	-27	0	-29	+12	- 9 q	+ 1 q	+ 2 q	+16 q	- 9	+ 2
12	+ 6 q	+14	-23 du	+ 2	-16	- 6	-10 q	- 5 q	+ 7 q	+12	- 6	-10
13	+ 3 q	- 1	-17	+ 8	-16	-10	- 7 q	+ 4 q	+ 4 q	0	-25 t	- 8
14	0 q	- 4	-22	+12	- 8	-11	0 q	+ 5 q	- 9 q	+ 4	-12	- 8
15	+ 6 q	+ 1	-16	+ 7	+ 8	- 5	+ 3 q	+ 8 q	+ 1 q	+ 4	-10	- 5
16	+ 3 q	- 2	+ 1 t	-12	+ 2	+ 2	+ 6 q	+ 5	+ 4 q	+ 5 t	- 1	0
17	+ 7 q	- 1	- 1	- 6	+ 5	+ 2	+14 q	+ 6	+ 9 q	+12	- 5	+ 4
18	+ 2 q	- 1	0	- 1	- 6	+ 6	- 1 du	0	- 3 q	-50 du	- 2	- 2
19	- 2 q	- 5	+ 4	- 4	- 2	+10	- 6	+ 2	-10 q	-32	- 1	+ 4
20	+ 3 q	- 8	0	- 9	+ 7	+12	+ 4	+ 6	- 9 q	-16 du	+ 2	+ 2
21	+ 4 q	- 2	- 4	0	+10	+ 3	+ 8	+ 8	+ 2 q	- 5 du	+10	+ 1
22	- 2 q	- 5	- 8	- 2	+14 eu	- 6	-31 du	+14	+ 8 q	- 4	+13	- 2
23	- 2 q	- 3	- 5	- 2	+12 eu	- 8	-14	+ 8	- 1 q	+ 2	+ 4	0
24	+ 1 q	+ 2	+ 2	+ 5	+ 8	- 9	-23	+ 6	+10 q	-17	+ 6 t	+ 2
25	0 q	- 3	+ 2	+ 7	+ 8	-12	-12	+ 6	-16 q	-32	+ 4	+ 3 t
26	0 q	- 2	+ 4	+ 4	+12	- 3	- 6	-33	- 4 q	0	+ 7	0 t
27	-25 q	- 7	+ 4	+ 4	-10 fu	+ 3	+16	-35 du	+ 2 q	- 4	+ 4	+ 2
28	-19 q	+ 1	+ 9	+ 8	-78 t	+ 1	- 2	-14	+ 3 q	+ 4	+ 9	+12
29	-12 q	+ 3	+ 8	+10	-45	+13	- 4	+ 3	+14 q	+ 6	+16	+10
30	- 9 q		+ 6	+10 du	-25 du	- 2 bu	+ 6	0	+ 8 q	+ 5	+18	- 3
31	- 1 q		+ 6		-15		+ 1	+ 3 du		+ 1		- 2

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1929											
1	+ 8	+16	-12	+10	+12 t	+ 4	+ 3 t	-18 du	+14	+14	+10	+20
2	+16	+16	+ 6	+ 6 t	+ 7	- 2	+11	-17	+12	+18	- 8	+24
3	+ 6	+18	+ 6	0 t	+ 2	+ 2	+26	- 4	+16	+18	-34	- 4
4	+ 6	+25	+16	+16	+ 4	+ 3	+14	- 7	+16	+16	-26	-34
5	-16	+25 t	+22	- 2	+ 2	+10	+20	- 2	+18	+14	-16	-36
6	-10	+12	+18	+ 5	+ 3	+16	+ 2	+ 6	+19	+14	-12	-24
7	- 3	+11	+11	+ 8	0	0	+ 6	+ 7	- 6	-14	-12	- 8
8	-10	+10	+12	+ 8	+ 4	+ 3	+ 4	+ 8	- 3	-16	+ 9	- 8
9	-22	+ 6	+12	+12	+ 9	+ 2	+ 3 q	+14	0 du	-12	- 5	- 4
10	-16	+ 6	+15	+ 8	+12	-14	-13 q	+30	-17 du	+ 2	+ 2	+ 4
11	- 9	+ 7	+ 8 du	+14	+14	-12	-14 q	+18	-17	+ 2	+12	- 2
12	+ 2	+ 8	-76	+ 4	0	- 7	-11	+ 1 du	-11	- 4	+ 6	- 2
13	- 6	+14	-20	+ 2	-24	- 4	-10	+10	- 4	- 6	+ 5	+ 6
14	- 5	+18	-12	+10	- 2	+ 4	-10	-20	-14	0	+ 4	+10
15	- 6	+20	-30	+ 9	+ 1	- 4	-28	-20 du	- 8	+ 2	- 2	+15
16	- 2	+24	-33 du	-28	- 6	- 6	-28	-10 du	- 6	-28	-24	-20
17	+ 4	-59 du	-14	-20	- 8	+ 4	-12	- 4	- 2	-20	- 4	-13
18	+ 6	-31 du	0	-10	- 8	+ 6	- 8	-14	- 3	-29	+ 3	- 8
19	+10	-22	+ 6	-10 du	-10	+16 t	+ 3	-12	- 3	-26	+ 6	+ 4
20	+13	- 6	0	- 8	0	+ 4 du	+ 7	-13	+ 7 du	-10	- 8	+ 8
21	+ 3	- 4	-17	-16	+ 8	+ 5	+ 7	- 2	0	- 2	+ 8	+10
22	- 2	- 9	- 3	- 6	+ 8 t	0	+ 5	- 2	-20	+10	+10	-14
23	+ 3	0	+ 1	0	-14	- 2	+ 6	+ 4	- 6	+ 4	+10	- 1
24	+ 6	+ 6	+ 2	+ 5 t	- 8	- 4 du	0	+ 2	+ 3	+ 6	+14	+ 6
25	+ 7	+ 4	+ 3	0 q	-18	- 6 du	- 6	+ 4	+ 5	+ 6	+17	+ 6
26	+ 6	- 4	+ 6	+ 3 q	- 4	- 4 du	0	+14	+ 5	+12	+16	+10
27	+10 t	-66 du	+15	0	+ 4	+ 6 du	- 2	+ 3	0	+12	+ 2	+15
28	+ 5	-46	+14	- 4	+13	-12 du	+ 5	+10	+ 3	+16	+14	+13
29	+ 4 t		+10	- 7	+ 2	- 1	+ 8	+ 6	+ 5	+ 8	+ 7	+16
30	0		+15	- 4 t	+ 2	-12	+ 8	+ 3	+ 7	0	+ 3	+ 9
31	+ 2		+20		0		+ 4	+ 4		+ 2		+ 6

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1930											
1	+ 2	- 1	0	+10	+16	-18	+ 4	+14	-10	- 4 du	- 5	0
2	+ 7	+10	0	+12	+24	-11	+ 6	+12 du	+12	+ 6	0	+ 7
3	+ 4	+ 4	+ 4	+15	+17	-14	+ 6	+18	-10	- 4	+ 9	-57
4	-20	+ 7	+11	+16	-11	- 6	+ 3	+17	+ 2	- 2	0	-47
5	-25 du	+10	+11	+21	-35	+ 3	+ 2	+20	+ 2	- 4	0	-10
6	-22	+16	+17	+ 2	-21	+ 6	+ 7	- 6	- 4	+ 3	+ 7	- 8
7	-17	+19	+16	-21	-12	- 5	- 2	-14	- 8	+ 3	+12	+ 2
8	- 6	+14	+18	-22	-10	+ 2	+ 6	- 8	0	- 2	+10	+ 4
9	0	+19	+26	-10	-14	+ 2	+16	- 6	- 4	+ 8	+10	+ 8
10	+ 6	+18	+25	-18	- 5	+ 5	-16	-10	+ 4	+12	+ 9	+10
11	+ 6	+20	+14	- 8	- 2	+14	-14 du	- 4	+10	+11	+10	+10
12	+ 8	-15	-42	-13	-12	+16 q	-10	- 6	- 2	+18	+13	+10
13	+12	-38	-28	- 8	- 2	+ 1 q	- 6	- 2	+ 2	+19	+18	0
14	+ 7	-30	-26	- 8	0	+ 2	- 2	- 2	0	+ 6	- 7	+ 5
15	+ 7	-24	-18	- 6	+ 4	+16	- 4	- 9	+ 6	- 2	-14	+ 8
16	+ 3	-17	-10	- 1	0	-38 du	- 6	- 5	+12	+ 6	- 2	+10
17	- 4	-12	-10	0	- 2	-14	- 4	+ 6	+16	-43	+ 2	+14
18	- 5	-13	-10	+ 4	- 2	-10	+ 4	+ 2	-20	- 8	+ 1	+18
19	- 6	-10	- 6	+12	+12	0 q	+ 4	+ 4	-16	- 7	+ 4	+18
20	- 6	- 6	- 6	-10	+ 2	- 4 q	+ 5	+ 2	+ 4	- 6	+ 9	- 2
21	-12	- 3 du	- 4	- 8	+ 4	+ 2	+ 8	0	- 4	+ 4	+12	-21
22	- 4	0	- 5	- 7	+ 3	+ 2 q	+ 3	-12	+ 1	+ 6	+20	-12
23	0	+14	+10	- 4	+ 5	+ 9 q	+ 2	- 8	+ 3	+12	- 1	- 6
24	+ 3	+ 9	- 4	0	+12	+11 q	+14	- 6	+ 5	+15	-23	- 4
25	+ 3	- 7	+ 2	+ 1	+ 8	+22	- 6 du	+ 2	+10	+ 6	-38	- 2
26	+16	0	+ 6	+ 4	+ 4	+15 q	-11	- 3	+14	-26	-18	+ 2
27	+16	+ 4	+ 1	+ 4	+20	- 2 q	+ 1	- 1	+10	-15	-14	+ 4
28	+20	+ 2	- 2	+12	+10 q	+ 9 du	0	0	+ 2	- 8	- 6	+ 5
29	+ 3		- 2	+14	+14 q	0	- 2	0	-16	- 8	- 4	+12
30	+ 2		+ 2	+17	+11 q	+ 3	- 4	+ 1	-18	- 8	- 6	+ 7
31	0		+ 4		-23		+ 6	- 3		- 6		+14

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity[*] (H) --Continued

Year 1931

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	+ 5	+ 2 q	+ 4	- 1	+16	+10	+ 6	+ 6	+ 9	+ 4	0 q	- 6 q
2	+ 4	+ 3 q	+ 6	+ 4	+12	-10	+ 4	+ 7	+17	- 8	+ 1 q	- 8 q
3	+ 6	+ 3 q	- 2	-12	+ 7	- 4	- 2	+ 2	+17	0 gu	- 4 q	- 6
4	+ 8	- 3 q	+ 7	- 8	+ 6	- 2	+ 4	+ 6	- 4	- 3	+ 1 q	- 4
5	+10	+ 7 q	+ 6	- 4	+ 2	+ 4	+ 2	+ 1	- 1 q	- 9	- 4 q	- 7
6	+11	+ 8 q	+ 4	0	+ 6	+ 2	+ 4	+10	- 5	+ 2	- 6 q	- 3
7	+10	+ 7 q	+ 6	+ 9 q	-18	- 6	+ 2	+ 9	- 4	+ 8	+ 2 q	+ 1
8	+10	+ 6 q	+ 8	+ 7 q	-10	-10	+ 4	- 4	- 1	+ 2	- 9 q	+ 4
9	+ 1	+ 6 q	+ 2 q	+ 9 q	- 1	-22	+ 6	- 4	- 6	+ 9	- 3 q	+ 4
10	- 5	+10 q	+ 7 q	- 6	+ 6	- 6	+ 6	- 1	- 2	+12	- 3 q	+ 2
11	- 6	+ 7 q	+ 8	- 4	+ 1	-10	+ 4	- 7	+ 4	+18	+ 3 q	+ 1
12	0	+10 q	+ 6	- 4	-10	- 8	+10	- 2	+ 5	- 3 q	+ 9 q	- 7
13	+ 3	+ 7 q	- 9	+ 3	-12	- 5	+ 7	+ 6	+10	- 8 q	+13 q	- 2
14	+ 6	-11 q	- 4	+ 6	- 7	0	+ 5	+ 1	+ 4	+ 2	+ 1 q	- 2
15	+ 8	-15 q	0	+ 8	-17	- 4	- 2	+ 3	-10	+ 3	- 2 q	- 4
16	- 8	- 1 q	+ 1	+10	-13	+ 4	- 5	+ 1	- 9 gu	+ 4	- 9 q	- 1
17	-12	+ 3 q	0	+ 7	- 8	+ 8	0	+ 4	-12	+ 8	- 3 q	+ 4
18	-10	+ 2 q	+ 3	- 3	-14	+ 6	+ 4	+ 8	- 3	+ 4	- 8 q	+ 7
19	- 4	+ 2 q	+ 5	-10	- 4	+ 8	0	+ 5	+ 4	+ 2	- 6 q	+ 4
20	- 4	+ 3 q	+ 7	-10	- 4	+ 6	+ 9	- 4	0	+11	+ 1 q	+ 6
21	- 2	+ 4 q	-14	+ 1	+ 1	+12	0	- 4	- 4	+10 t	+ 4 q	+ 7
22	0	+ 3 q	-10	- 6	+ 4	+ 4	+ 4	- 4	- 1	+ 4 t	+ 9 q	+10
23	- 1	+ 1 q	-11	- 4	+12	+ 6	- 3	- 6	0	+ 6	+ 2 q	0
24	+ 8	-28 q	- 9	+ 2	+11	+ 2	- 8	+ 2	- 7	+ 2	+ 8 q	+ 2
25	- 9	-20 q	-15	+ 6	+10	+ 9	-12	-10	- 2	+ 8	+14 q	- 5
26	-12	-19 q	+ 1	+ 3	- 1	+12	- 8	- 3	- 6	+ 6	-12 q	+ 2
27	-12	- 8 q	- 2	- 4	- 2	- 2	- 4	- 6	- 2	+ 2	- 9 q	+ 8
28	-10	- 3 q	- 2	+ 6	+ 2	- 4	- 6	- 8	+ 2	- 8	0 q	+ 3
29	- 6		- 2 q	+ 2	+ 2	- 2	- 6	- 3	+14	-50	+ 2 q	- 1
30	+ 1		+ 4 q	+ 7	+10	0	-11	+ 2 gu	- 4	-44	+ 3 q	- 8
31	- 2		+ 4		+10		-10	0		-12 q		- 6

Year 1932

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	- 5	+ 6	+24	- 6	+ 4	-14	+ 6	- 1 gu	+ 2	+ 5	-10	+ 6
2	- 6	+12	+24	-10	+ 2	-10	+ 5	- 1	0	+ 6	- 1	+ 6
3	- 6	- 8	- 5	- 8	-10	- 6	+ 8	0	+ 2	+ 6	+ 2	+ 2
4	+ 4	-14	- 5	- 1	- 4	+ 2	+14	+ 2	0	+14	- 3	+ 5
5	+ 2	- 8	- 6	- 6	- 6	+ 4	+14	- 4	+10	+12	0	+ 6
6	+12	- 6	- 7	- 5	- 6	+ 5 gu	-10	- 1	- 7	+12	+ 4	+ 8
7	+ 8	- 5	- 4	-10	0	+ 8	- 8	+ 2	- 5	+14	+ 4	+10
8	+ 6	- 4	- 5	- 4	+ 5	- 6	- 6	+ 2	- 2	+13	+ 5	+ 1
9	- 2	0	- 6	- 1	+12	- 9	- 6	- 2	- 2	+12	+10	- 4
10	0	- 6	-17	0	+14	- 9	- 6	+ 5	+ 4	+ 6	+12	- 4
11	- 6	- 6	- 5	0	+14	- 8	- 2	+ 6	+ 8	+ 6	+14	+ 2
12	- 4	- 6	- 2	+ 6	+ 8	0	- 4	+ 6	+ 6	+10	+ 4	+ 5
13	- 4	- 8	+ 6	+13	+10	- 2	0	+ 1	+12	+12	0	+ 4
14	- 2	- 6	+ 6	+ 4	+10	0	+ 2	+ 2	+10	+14	- 6	-23
15	- 3	+ 1	+10	+ 8	+ 4	+ 3	+ 2	0	+10	-12	- 2	-34
16	0	+ 2	+17	+ 7	+ 4	+ 7	- 2	+ 6	+14	-10	-17	-15
17	- 2	+ 5	+13 q	+ 6	+ 3	+ 8	- 6	+12	+17	- 8	-12	-13
18	+ 2	+ 9	+ 7 q	- 4	+ 4	+ 4	- 4	+ 6	+ 2	- 4	- 8	- 5
19	+ 4 q	+12	+ 6	+14	+ 2	+10	- 1	+10	- 6	0	- 6	- 4
20	+ 8 q	+ 8	+12	+12	+10	- 4	- 3	+15 gu	- 4	-24	- 6	0
21	+10	+ 6	+ 4	+11	+10	0	0	0	0	-18	- 4	+ 5
22	+13	- 4	- 4	+12	+ 2	- 8	- 1	- 2	- 2	-10	- 2	+ 6
23	+17	- 2	+ 4	- 4	+11	- 6	0	- 2	- 8	- 7	+ 2	+ 6
24	+10	- 1	+ 6	- 4	+ 5	+ 1	+ 4	0	- 8	-12	+ 8	+12
25	- 2	- 1	+ 8	- 8	- 6	+ 4	+ 5	+ 7	-17	- 7	+10	+ 6
26	- 6	+ 4	+10	- 4	+ 2	+ 2	0	+ 4 gu	- 7	- 6	+ 2	+ 2
27	-12	+10	+ 7	- 7	0	+ 1	0	-13	-11	- 7	0	- 3
28	-10	+10	-18	- 2	0	+ 6	- 1	-20	- 4	- 2	+ 4	0
29	- 4	+10	-20	0	-44	+ 6	+ 4	-17	- 6	+ 4	- 6	+ 3
30	- 3		-19	+ 2	-46	0	+ 2	-20	-12	- 4	- 1	0
31	- 4		-19		-21		-11	-10		- 4		0

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[*] These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1933											
1	+ 4	0	+ 2	+ 5	-36	- 4	0	+18	+16	+13	+ 5	+ 4
2	+ 2	- 2	+ 5	+ 1	-24	- 3	0	+15	+18	+11	+ 4	+ 7
3	+ 6	+ 4	+ 8	- 2	-10	- 1	+ 4 gu	+ 8	+15	+15	+ 3	0
4	+ 8	+ 3	+ 4	+ 4	- 6	0	+ 4	+18	+21 gu	+ 1	- 2	- 7
5	+13	+ 8	+ 4	- 1	0	+ 2	+ 6	- 5	+18	- 5	- 4	-13
6	0	+ 7	+10	+ 4	- 4	+ 6	+ 4	-22	+20	- 1	-14	- 2
7	- 1	+10	+12	+ 4	- 6	+10	+ 7	- 8	+16	- 6	-12	- 4
8	+ 6	+ 4	+10	+ 4	+ 5	0	+12	- 4	+12	- 6	- 9	- 4
9	+ 8	0	+ 9	+ 2	+ 5	-10	- 1	- 1	-56 gu	- 6	- 1	-22
10	+ 6	+ 8	+ 9	+ 5	+ 6	+ 2	+ 2	+ 2	-24	- 6	- 3	-15
11	+10	+12	+ 8	+ 8	+10	+ 2	0	+ 3	-16	- 8	- 8	- 8
12	+12	+10	+ 9	+ 8	+13	- 4	- 4	+ 9	-12	- 3	- 7	- 2
13	+16	+ 6	+ 9	+12	+ 4	-15	+ 3	- 1	-22	- 2	0	+ 4
14	+ 9	+12	0	+ 8	- 6	-14	0	- 8	-16	- 6	+ 3	+ 5
15	-10	+ 8	+ 4	- 6	- 5	- 4	+ 6	- 5	-20	- 2	+ 6	+ 8
16	- 2	+ 5	+ 6	- 8	- 1	0	+ 8	- 1	-10	- 3	+ 4	+ 9
17	+ 3	+10	+10	- 9	0	0	+ 8	- 8	- 6	- 4	+ 8	+ 2
18	+ 2	+12	-12	- 8	-10	- 4	- 1	-10	- 6	-16	+ 4	- 3
19	- 2	- 5	- 8	- 6	- 6	0	- 1	- 8	0	- 5	+ 1	+ 2
20	- 4	-10	-17	- 7	+ 2	- 2	- 6	0	- 2	0	0	0
21	+ 6	-18	-13	- 6	+ 4	+ 6	- 1	-12	0	+ 4	+ 2	+ 4
22	-14	-14	- 8	- 4	+ 4	+ 5	+ 2	- 5	- 2	0	+ 5	+ 3
23	-15	-19	-12	- 7	+ 4	+ 2	- 4	+ 2	+ 5	+ 6	+ 1	0
24	- 6	-17	-16	- 6	+10	+ 4	-17	- 8	+ 6	+ 6	+ 4	+ 4
25	- 8	-14	-16	- 2	+13	+ 8	-14	- 4	+ 5	0	+ 7	+ 6
26	- 4	-15	0	0	+10	+ 2	- 9	+ 3	+ 8	0	+ 6	+ 6
27	-10	-10	- 6	0	+12	+ 4	- 6	+ 2	+ 8	0	- 2	+ 1
28	-10	- 7	- 8	- 2	+10	+ 2	-10	+ 8	+ 6	+ 1	- 4	0
29	-10		- 4	0	+10	+ 1	- 2	+ 2	+ 8	+ 2	- 2	- 1
30	- 8		- 4	+ 8	- 1	+ 3	- 3	+ 8	+ 8	+ 4	- 2	+ 6
31	- 8		+ 4		+ 4		+ 4	+ 9 gu		+12		+12

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1934											
1	- 2	+ 8	+16	- 8	+ 1	+ 1	+10	- 8	0	- 1	+ 6	+10
2	- 8	+13	- 1	- 6	- 4	+ 5	+ 5	- 8 gu	- 6	- 2	+ 6	+ 7
3	- 3	+ 7	+ 4	- 8	- 8	+ 9	+ 6	- 6	- 1	+ 2	+ 4	-10
4	+ 2	+ 8	- 9	-11	0	+ 9	+ 2	-10	- 2	+ 8	+ 6	-26
5	+ 3	- 2	-16	- 8 q	+ 8	-18	0	- 3	+ 1	+10	+11	- 9
6	+ 9	+ 6	- 6	- 4	+ 2	-15	- 2	+ 4	- 4	+14	+ 5	- 4
7	+ 4	+ 6	- 6	- 3	+ 8	+ 1	+ 2	+ 2	0	+ 9	- 5	+ 2
8	+ 2	- 4	- 5	+ 1	+ 9	+ 7 q	- 2	+ 4	+12	+ 4	-12	+ 2
9	+ 5	-13	+ 2	- 2	+ 8	- 4	+ 1	+ 4	+12	+10	-12	+ 6
10	+ 1	0	+ 2	+ 3	0	- 2	0	+ 7	+12	+ 9	- 6	+ 1
11	+ 2	- 2	- 2	+11	0	+ 2	+ 4	+ 2	+13	+10	- 8	+ 8
12	+ 4	- 1	- 2	+ 6	-12	- 7	+ 8	+ 3	+ 3	0	- 4	+ 8
13	+ 9	- 4	+ 7	+ 4	- 2	- 4	0	+ 2	+ 6	0	- 8	+ 9
14	-10	- 2	+ 6	- 3	+ 2	- 4	+ 7	+ 4	+10	0	- 3	+ 6
15	- 8	0	+ 2	0	+ 2	- 4	- 3	- 2	+18	- 3	- 4	+ 4
16	- 4	-12	+ 4	- 4	+ 6	+ 2	- 3	- 2	- 1	- 4	- 2	+ 9
17	+ 3	-21	+ 5	- 1	+11	- 1	0	+ 4	0	- 2	+ 3	+ 8
18	+ 1	-10	+ 2	+ 6	-20 gu	- 4	- 4	+10	+ 1	+ 2	+ 6	+10
19	0	- 6	+ 2	+10	-12	- 4	0	+ 4	+ 4	+ 2	+ 6	+ 8
20	+ 5	- 6	+ 4	+ 4	- 9	- 1	- 2	+ 4	+ 5	- 2	+ 4	+10
21	0	0	+18	+ 2	+ 2	0	+ 4	0	- 1	- 2	+ 6	+ 5
22	0	0	- 4	+ 4	- 9	+ 2	+ 4	+ 2	0	- 1	+ 7	0
23	- 4	+ 6	+ 4	+ 6	- 7	+ 8	+ 6	+ 7	+ 8	- 1	+ 4	0
24	- 7	+ 6	- 6	+ 1	+ 1	+ 2	+ 6	+ 2	-10	-21	- 2	- 4
25	- 2 t	+ 3	-10	- 1	+ 2	+ 4	+ 5	+ 4	-30	-20	- 8	- 6
26	- 6 t	+ 8	- 2	- 3	- 2	+ 4	- 4	+ 7	-10	-14	- 4	- 2
27	- 8	+ 6	+ 4	- 6	+ 4	+ 8	+ 1	-13	-14	- 9	0	+ 5
28	- 3	+ 8	- 4	+ 5	+ 8	+ 3	+ 2	- 9	- 6	- 9	+ 1	+ 5
29	+ 3		- 2	0	+ 6	+ 2	- 2	-10	- 8	0	- 6	-26
30	+ 5		0	+ 5	+ 2	+ 8	-28	- 8	- 6	0	+ 2	-22
31	+ 2 gu		- 2		0		-24	- 2		+ 2		-14

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity* (H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1935						
1	- 4	-16	+12	+ 4	- 6	+ 8	+ 4	+ 6	+21	+12	+ 4	- 6
2	- 2	-16	+ 5	+ 7	-12	+11	+ 5	0	+20	+10	- 3	- 4
3	0	- 6	+ 2	+12	- 8	+12	+ 6	+ 5	+21	+10	- 3	- 8
4	- 2	+ 7	+ 8	+ 4	- 6	+18	+ 9	+ 7	+17	+15	+ 2	+ 4
5	0	+ 4	+ 8	+ 6	+ 2	+15	+ 9	+10	+ 8	+14	- 4	+10
6	+ 4	+ 8	+ 2	+12	+ 2	+15	+ 9	+ 4	+12	+20	- 2	+ 6
7	+16	+13	+ 4	+12	+10	- 8	+12	+ 2	+12	+18	+ 2	+ 6
8	+18	+ 9	- 2	+ 8	+13	-14	- 9	+ 4	+16	+ 6	+ 2	+12
9	+14	+ 6	+ 2	-14	+ 9	- 2	- 5	+ 6	+18	+ 9	+ 6	+ 8
10	+12	+10	+ 2	- 8	+ 8	-10	- 4	+ 4	+12	+ 2	+ 7	+ 8
11	+ 5	+10	+ 4	-23	- 7	- 8	+ 2	+ 6	- 2	- 1	+ 4	+ 7
12	+ 2	+10	+10	-15	-11	- 4	+ 1	+ 4	-18	+ 7	-20	+ 6
13	+ 2	-16	- 6	-14	- 2	- 6	+ 6	+ 7	- 5	+10	-16	+ 6
14	+ 6	-16	-24	-13	- 2	- 6	+ 7	0	- 2	+ 1	-16	-10
15	+ 2	- 7	-21	+ 1	+ 2	0	0	+ 2	- 5	+ 2	- 4	-11
16	+ 5	- 2	-10	- 7	+ 2	+ 6	+ 4	- 6	- 4	0	- 5	-10
17	- 8	0	- 6	- 6	+ 4	+10	+ 4	0	- 6	+ 2	- 2	- 3
18	- 6	0	- 4	- 9	- 3	-26 gu	+ 4	- 2	- 6	0	+ 3	- 4
19	- 1	+ 6	- 5	- 6	- 6	-12	-13	- 2	-12	+ 4	- 1	0
20	0	- 3	- 4	- 4	-18	-10	+ 4	-12 gu	+ 4	-19	- 4	+ 4
21	-10	- 2	-10	- 7	- 5 gu	- 6	+ 7	-10	+ 8	-20	- 1	+10
22	-13	+ 2	- 5	+ 1	- 9	- 1	- 2	- 6	+11	-10	- 1	+ 8
23	- 4	0	- 4	0	- 4	- 1	- 5	-10	-22	- 3	+ 4	+10
24	- 9	-10	- 6	0	+ 2	+ 6	- 2	-10	-10	-14	+12	+14
25	- 6	+ 6	+ 2	+ 3	+10	+ 8	-20	- 8	-31 gu	-20	+ 7	+ 1
26	+ 4	- 6	+ 2	+ 7	+ 2	+ 6	- 7	+ 2	-19	-10	+ 4	-10
27	- 8	+ 2	+10	+ 6	+ 8	+ 9	- 8	+12	-14	-22	+ 2	-14
28	-15 gu	+ 4	+ 8	+12	+ 8	0	- 7	- 2	-14	-12	+ 3	-10
29	+ 2		+11	+16	+ 6	0	-10	- 4	- 8	-12	+16	-10
30	0		+11	+16	+ 9	+ 2	- 2	- 4	-11	-10	- 5	- 4
31	+ 4		+ 2		+ 4		0	- 5		0		- 6

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1936						
1	+ 1	+ 4	+ 6	+ 8	- 7	+ 4	+18	- 9	+ 1	+ 5	-10	-18
2	+ 4	0	+10	+10	0	- 2	-22	+ 2	0	+12	+ 3	-10
3	+ 2	+ 2	+17	0	+18	- 6	-17 gu	+10	- 2	+14	-24	-10
4	+ 6	+ 3	+19	0	0	+ 2	- 3 gu	- 2 gu	- 6	+18	-15	- 2
5	+ 7	+11	+16	+ 5	0	+ 6	-11	- 3	- 2	+ 2	- 4	- 2
6	+14	+10	+ 8	+16	+ 4	+ 8	-17	- 8	0	- 8	+ 2	- 4
7	+17	+14	+12	+12	+ 4	+16	- 6	+ 8	+10	- 4	+ 4	- 7
8	+ 6	+10	+ 6	+ 9	+ 8	+ 9	0	- 2	+ 6	- 2	- 8	0
9	- 3	+ 6	+ 4	+14	+10	-10	+ 2	-14	+ 2	- 6	+ 2	+ 4
10	- 1	+ 1	+ 7	+14	+14	-10	-10 gu	- 9	- 5	-15	+ 8	+ 8
11	+ 2	0	+10	+18	+20	- 4	- 8	0	-12	+ 5	-18	+ 8
12	- 2	+ 8	+12	+10	- 4	0	- 2	+ 4	- 8	+ 8	- 6	+19
13	- 8	+15	+14	+ 8	- 4	0	- 8	- 4	- 6	+12	- 1	+11
14	- 2	+12	+ 9	+ 4	-10	- 8	- 2	+ 8	- 2	+ 6	+ 7	+ 8
15	0	- 2	+ 6	-11	- 4	- 3	+ 2	- 2	0	+ 1	+ 2	+10
16	+ 8	+ 4	+ 6	0	-12	- 3	- 1	- 4	+ 1	-24 gu	+ 2	+14
17	+ 6	-18	0	- 6	- 8	+ 1	+16	- 2	+10	-21	+ 2	+10
18	0	- 7	- 4	-30	-12	+ 4	+ 2	+ 2	+10	-13	+ 3	+ 8
19	0	-19	- 6	-22	-17	-54	+ 3	+ 4	+10	- 6	+10	+ 8
20	+ 2	- 8	-12	-27 gu	-10	-20	- 1	+ 2	+ 8	- 7	+ 1	+ 6
21	+ 2	-10	-19	-25	- 7	- 4	+ 6	0	+12	+ 1	+ 8	+ 8
22	+ 3	-11	-11	-29	- 2	- 2	+ 8	- 5	+12	+ 8	+10	+ 8
23	+ 5	- 8	-22	-16	+ 2	0	+ 6	+ 2	- 7	+ 4	+12	- 1
24	-14	- 1	-18	- 8	+ 4	+ 8	+16	+ 6	- 2	- 4	+18	+ 5
25	-24	- 6	-24	+ 2	+ 9	+11	+10	+10	0	- 4	+18	+14
26	-12	-14	-22	+ 8	0	+ 7	+ 8	+12	-20	0	+16	+16
27	- 6	- 7 gu	-17	+13	+ 3	+ 9	+10	+ 6	0	+ 6	+14	-12
28	- 3 gu	+ 3	- 6	+ 7	+ 5	+16	+10	+ 4 gu	- 2	+12	+15 gu	-50
29	+ 1	+ 7	-10	+ 8	- 9 gu	+13	0	0	- 5	+13	-44	-30
30	- 3		0	+ 6	- 3	+10	-12	-10	- 6	+12	-22	-19
31	- 4		+ 4		- 3		0	- 8		-18		- 4

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1937						
1	+ 5	+ 8	- 5	-10	-21	-13	- 2	+26	+12	-19	+ 2	-32
2	+ 1	+ 6	-22	-13	- 8	- 2	0	-43	+ 6	- 1	- 6	-16
3	- 6	-58	- 1	-16	- 2	+10	+ 2	-16 gu	+ 6	0	+ 6	- 4
4	- 2	-31	+ 6	- 5	-10 gu	+17	+18	-20 gu	- 2	-58	+10	+ 7
5	0	-21	-10	+ 6	-53	-13	+26	0	0	-12	+12	+16
6	+ 6	-10	- 4	+17	-18	-48	- 4	+ 6	+ 2	+10	- 5 gu	+10
7	-14 gu	- 4	+ 7	+26	+ 3	-20	- 6	- 2	+ 4	0	+ 6	+ 1
8	-15	+ 9	+12	+25	+12	- 8	+10	+ 7	+ 8	-19	- 4	0
9	- 5	- 8	+11	+27	+ 4	0	+ 5	+ 8	+14	-12	+ 1	+ 2
10	- 8	- 3	+18	+24	- 2	+16	- 6	+ 4 gu	- 1	-18	+ 7	+ 8
11	- 9	0	+17	+20	- 9	+ 6	+ 5	+18	-24	+ 6	+ 5	+ 4
12	- 1	- 2	+16	+ 4	+15	+10	+ 8	+20	- 8	- 4	+ 8	+ 6
13	- 3	0	+11	- 2	+19	+ 6 gu	+10 q	+18	-12	- 2	+12	+14
14	+ 3	-10	-10	+ 4	+19	+10	-23	+20	- 5	+ 8	+13	+16
15	+10	0	-16	+16	+11	+10	- 8	+ 4	- 2	+ 4	+17	+21
16	+ 4	+ 2	- 4	+19	+12	+ 8	0	+12	- 1	+ 6	+24	+21
17	+16	+ 5	- 1	+22	+11	+ 6	+10	+12	+ 2	+10	+12	+20
18	+11	+ 8	0	+16	+15	+ 2	+22	+18	- 6	+24 gu	-10	-10
19	+10	+ 9	+ 4	+19	+ 5 gu	+11	+20	+16	- 1	+20	-14	-14
20	+13 gu	+14	+ 6	+20	+13	+ 2	+ 7	+16	0	+22	-11	- 6
21	- 5	+14	+19	+14	+21 gu	- 9	0	+12	+ 6	+20	- 4	+ 5
22	0	+10	- 5	+18	+18	0	-30	-78 gu	+ 8	+14	-14	- 4
23	- 1	+10	- 1	+17	+11 gu	+ 2	-23	-30 gu	- 7	-12	- 9	-30
24	+ 8	+16	+ 4	+ 3 gu	+16	+ 4	-29	-17	-10	- 7	- 7	-33
25	+10	+18	+ 7	-38 gu	- 7	- 7	-16	- 9	+ 4	- 7	+ 2	-20
26	+15 gu	+ 8	+ 8	-27 gu	- 5	+ 6	-14	+ 6	+ 2	- 5	+ 8	-19
27	0	+ 9	-18	-72 gu	- 4	+ 5	+ 2	- 7	+ 4	-10	+ 2	+ 2
28	-22	+14 gu	-12	-89 gu	-32	-12	- 6	-12	+ 3	+ 2	- 5	+ 2
29	- 8		- 4	-35 gu	-19	0	+ 1	- 8	+14	+11	- 8	+ 8
30	+ 1		+10	-34	-12	+ 6	+ 6	+ 4	-14	+11	-48	+14
31	- 4		-48		+ 2		+11	+ 5		+14		+10

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1938						
1	+30	-15 gu	-12	+26	+16	- 6	- 2	- 6	+23	-30 gu	+10	+27
2	+36	- 8	- 4	+28	+12	- 9	+ 2	-17 gu	+30	-12	+11	-12
3	+28	-10	+ 1	+22	-13	- 9	+17	- 1 gu	+18	-10	+ 6	-41 gu
4	+22	+ 1	+ 3	+14	-12	- 1	- 1 gu	-38	+18	+ 9	+13	-12
5	+27	+11	-22	+16	- 8	+ 6	+ 3 gu	-30	+17	+10	+12	- 1
6	+32	-25	-14	- 1	0	+ 8	- 6	- 9	+28	+16	+ 6	+12
7	+18	+ 4	- 2	+ 6	+ 6	+ 8	+ 1	- 9	+20	-59 gu	+ 6	+17
8	+ 6	-14	+ 2	+12	+14	+ 2	0	+ 4	+18	-48	-22	+20
9	+18	-21	+ 7	+13	+18	+10	+ 8	+ 7	+25	-17	-36	+12
10	+36	-24	+22 gu	+16	+16	-11	- 5	+19	+13 q	-10	-12	-24
11	+34	-22 gu	+17	+14	+31 q	-19	+14	-22	+12 q	+ 3	- 2	-15
12	+20	0	+14	+10	-82 gu	- 9	+19	-10 gu	+14	+12	+ 8	- 6
13	0	+ 6	+16	+16	-34	-18	+21 gu	+ 2	+ 8	+18	+ 6	- 2
14	+26	-22	+ 6	-10	-34	-13	- 6 q	+ 4	-44	+24	0	+ 2
15	+24	-14	+ 4	0 gu	-26	- 6	-37 gu	+ 6	-69 gu	+20	- 5	+10
16	+34	- 2	+10	-116 t	-21 gu	- 6 t	-36	+12	-24	+ 6	+ 5	- 8
17	-59 gu	+ 6	+10	-42	-10	- 3 t	-17	+ 6	-10	+22	- 9	-23
18	-36	+14	+23	-20	- 3	+ 4	- 4	+16	- 4	+20	- 6	-30
19	-14 gu	+15	+19	-16	+ 1	+16	- 4	+ 6	+ 9	+20	0	-27
20	- 3 gu	+17	+22	- 3	+ 4	+14	- 4	+14	+10	+16	+ 6	-14
21	- 8	+20	+26	- 2	+20	+ 3	+ 1	+12	+12	+20	- 1	+ 1
22	-113 gu	+18	-38	0	+16	- 4	+ 4	+ 9 gu	+ 9	+24	-11	-16
23	-40	+16	-34	-24	+25	0	+ 2	- 4	+ 9	+14	0	- 2
24	-22	+14	-40	- 7	+30	+ 7	+10	0	+11	- 5	-18	- 2
25	-47 gu	+14	-20	-12	+28	+ 6	+ 6	- 4	+18 gu	-10	- 4	+ 8
26	-68	+11	-26	+ 4	+12	+ 6	+ 9	0	-25	-22	- 7	+16
27	-12	+ 9 gu	- 6	+11	+14	+ 6 t	+14	+11	-37	-22	+ 6	+17
28	+ 6	+ 3	0	+14	+15	+ 2 t	+14 gu	+20	-48	-12	+11	+18
29	+ 8		+ 8	+21	-23	+ 4	+14	+13 gu	-25	- 6	+ 9	+18
30	+ 9		+ 8	+18	- 4	+ 6	-34	+ 4	-25	+ 1	+18	+17
31	+ 6		+16		+ 1		-14	+ 4		+14		+22

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity* (H) --Continued

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1939						
1	+ 6	+ 6	- 8	- 4	-35 ku	+14	+10	+19	+14	+27	- 4	+ 8
2	+ 3	- 6	-14	+10	-40	+11	+12	+21	+16	+36	- 4	+ 5
3	+ 7	+ 6	-14	+ 2	-20 ku	+ 2	- 5	+26 ku	-13 ku	-14	+ 5	+ 6
4	+16	+ 6	-19	+ 4	+ 3	- 2	- 8	+24	0	-31	+10	+ 6
5	+12	+12	- 4	+16	+22	0	-60	+36	+ 4	-14	+ 6	- 9
6	+ 4	-42	- 2	+24	- 8 ku	+ 8	-27	+32	+ 6	-12	+ 5	-18
7	+ 1	-26	+ 3	+26	-22	+14	- 8	+29 ku	+10	- 3	+ 2	-36
8	- 7	- 6	- 2	+32	-12	+14	0	+35	+16	+ 7	+ 8	-20
9	-12	- 6	+ 4	+27	- 6	+16	+ 6	+30	-10	- 8	+ 6	- 9
10	- 8	+ 2	+10	+10	+ 8	+26	+16	+22	- 4 ku	+10	+ 6	- 4
11	- 8	+ 5	+ 9	+17	+16	+15	+32	+27	- 3	+24	+ 9	- 3
12	+ 3	+21	+ 7	+19	+19	+14	+15	-59	+ 2	+23	+ 2	- 1
13	0	+22	+16	+20	+16	+16	+ 4	-28	+ 1	-33 ku	-27 ku	- 1
14	- 4	+23	+23	+26	+29	-40	0	-12 q	+ 8	-59 ku	-29	+ 8
15	- 6	+24	+19	+25	+16	-24	+ 4	+ 3 q	+14	-38	-12	+ 4
16	- 7	+12	+ 7	+33	- 1 ku	-28	+ 5	-28	+15	-28	- 2	+11
17	-14	+ 9	+10	-68 t	+ 2	- 6	- 4	-18 ku	-37 ku	-21	+ 6	+ 2
18	- 8	+16	+16	-30	- 3	-12	+ 2	- 8	-20	-21	+10	+ 8
19	- 7	+13	+22	-18	0	-20	+ 7	+ 8	-30	-11	+ 8	+12
20	- 4	+14	+19	-20	- 7	-14	-12	+21	-24	+ 8	- 2	+20
21	- 3	+24	+ 2	-16	- 3	-10	-16	+ 8	- 4	+ 8	+ 6	- 7
22	- 3	+23	- 6	-14	0	- 4	0	-80 ku	- 2	+12	+13	-10
23	- 2	+27	0	-45 ku	- 6 t	- 4	0	-57	+ 4	+ 2	+19	- 3
24	- 4	-53 ku	+ 8	-28 ku	- 4	- 4	+ 8	-27 ku	+ 4	+ 9	+ 5	- 6
25	0	-78	+10	-49	- 6	+ 8	- 2	-19 ku	+ 6	+14	-17	0
26	+ 6	-28	+10	-17	- 4	+15	- 6	-14	-12	+22	-13	+10
27	+10	- 8	- 4	0	+ 3	+ 6	- 4	-12	+ 3	+26	- 5	+12
28	+ 8	- 9	-43	- 2	+13	+ 7	+ 1	- 5	+11	+20	- 2	+ 2
29	+ 4		-36	+ 2	- 4	- 2	+ 8 ku	+ 4	+20	+12	+ 1	0
30	+ 6		-20	+ 7	+15	- 6	+ 4	+ 7	+ 4	+14	+ 1	+ 3
31	+ 4		-10		+22		+14	+12		+18		+ 6

75° west mer. day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1940						
1	+ 7	-18	+29	-46	- 6	+12	- 3	- 1	- 6	-20	+10	- 4
2	+ 3	- 9	+39	-43	- 8	- 1	+ 2	+ 6	- 6	-22	+ 5	- 8
3	-30 qu	- 6	+32	-48	+ 2	+10	- 5	-13	-15	-16	+ 2 q	- 2
4	-20 ktu	- 4	+32	-18	+ 4	+20	-16	-10	-10	- 2	-10 q	+ 1
5	- 7 ktu	+ 2	+33	- 7	+10	+16	-10	+ 3	+ 1	+ 4	- 4	+ 2
6	- 6	0	+40	- 2	+14	-28 ku	- 8	- 1	- 2	- 4	+ 6	+ 6
7	- 1	0	+35	+ 6	+ 6	- 5	- 8	- 3	-18	-42	+ 6	+12
8	+ 4	- 7	+18	+10	+12	- 5	+ 6	- 9 ku	- 2	-45 ku	+12	+19
9	+ 5	- 2	+ 4	+12	+ 7	0	+14	-22	- 8	- 8 ku	0	+12
10	-10	+ 2	+20	+20	+ 8	+ 6	- 5	- 6 ku	0	- 4	+12	+14
11	-23 u	- 5	+28	+24	+ 3	+10	- 4	- 2	+10	0	+18	- 3
12	-10	+ 3	+18	+23	- 5	+16	+ 3	- 3 ku	+15	+10	- 8	+ 2
13	- 2	+ 6	+14	+16	- 3	+26	-18	+ 1	+26	+ 8	-29	+ 6
14	0	+10	+18	+ 4	+ 1	+ 4 ku	-17	- 3	+18	+18	-12	+ 3
15	+ 9	+13	+29	+ 2	- 5	-15	-10	+ 4 t	+ 2	+15	+ 2	+ 6
16	+ 8	+10	+30	+ 2	+ 6	- 1	- 6	+ 8 t	- 1	+ 6	- 1	+ 8
17	- 4	+12	+33	+ 6	+ 4	- 3	- 2	+11	+10	+12	+ 2	+ 4
18	-30	+18	+45	+14	-26	- 8	+ 6	+ 2	+21	+ 9	+ 8	+ 6
19	-16	+16	+11	+15	- 8	+ 3	+ 7	- 4	+19	+ 2	+20	+14
20	- 2	+ 2	+ 6	+33	+ 3 ku	+ 2	+14	- 7	+19	+ 5	+14	-20
21	+ 2	- 7	+18	+16	+ 4	+ 7	+12	- 1	+ 7	+ 6	-13	-22
22	+12	- 5	+26	- 1	-12	+20	- 6	+ 2	+ 8	+ 4	-16	- 8
23	+14	-13	+ 9	+ 5	+15 ku	+12	0	+ 2	+15	+ 7	-18	-12
24	+ 4	-16	-69 q	+10 q	-30 ku	- 3	+ 1	+ 3	+12	+12	0	- 4
25	+ 4	-18	-150	-25 ku	0	-46	0	+18 ku	+ 2	+34	- 9	- 3
26	+14	- 4	-65 ku	-37 ku	- 2	-22	+ 6	+12	-24	- 6	- 2	- 2
27	+20	0	-36 ku	-14	- 7	-20	+13	+ 4	-42	-10	+ 2	+ 2
28	+20	+ 8	-17	+ 4	- 8	- 5	+15	+ 4	-34	+ 4	+10	- 4
29	+16	+ 6	-76	+10	- 1	+ 8	+18	+ 2	-14	+ 9	-10	-11
30	+16		-112	+16	+ 2	0	+10	+ 5	- 8	+14	0	0
31	+ 3 ku		-88		+ 8		0	0		+ 8		- 6

*These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G--Daily mean departures from monthly means in horizontal intensity*(H) --Concluded

75° west mer. day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1941											
1	-10	+ 6	-146 mut	-22	-12	- 3	+26 q	+13 q	+ 6	- 6 ku	-56	-54
2	- 2	+ 2	-66 ku	-16	-12	+ 6	+33 q	-12 q	+10	+ 2	-16	-35
3	+ 8	-21	-30 ku	-12 ku	- 3	+ 9	+40 q	+ 6 q	+18	0	- 4	-14
4	+ 3	- 6	-20	- 8	- 7	+10	+14 q	-54 q	+18	+10	0	-14
5	+16	- 4	-15	- 6	+ 4	+ 5	-250 q	-28 q	+22	+ 6	0	-12
6	- 7	- 8	- 8	+ 8	+ 4	+10	-64 q	-21 q	+30	+10	-14	- 6
7	- 7	- 4	+ 8	+ 8	0	+ 8	-14 q	-11 q	+22	+12	- 8	- 2
8	0	+ 2	+12	+ 7	+ 3	+10	-22 q	- 4 q	+13	- 2	0 ku	+ 1
9	0	+ 2	+ 8	+ 6	- 3	+22	- 1 q	+ 4 q	+18	+ 6	+ 1	0
10	+ 2	+ 4	+12	0	+ 8	+10	- 9 q	+19 q	+21	+12	-15	+ 4
11	- 3	- 2	+12	+ 6	+ 6	- 2	- 2 q	+14 q	+22	-26	- 6	+10
12	+ 6	+11	+22	+ 5	+18	+ 2	+ 3 q	+12 q	+26	-17	+ 2	+ 4
13	+10	+ 4	+10	+ 6	+12	-24	+ 6 q	+16 q	+18	- 2	+ 6	- 1
14	+12	+ 4	-14	+ 8	+11	-24	+10 q	+ 4 q	+ 4	- 6	+ 8	-12
15	+17	+ 6	+ 4	+20	+12	-15	+15 q	+11 q	+10	-13	+19	- 4
16	+ 6	+ 4	+10	+13	+13	- 8	+16 q	+10 q	+ 8	- 6	+20	+ 2
17	-12	+ 3	+18	+14	-10	- 8	+ 8 q	+15 q	+16 ku	+ 2	-12	+ 3
18	-17	+10	+22	+ 6	- 5	- 8	+11 q	+20 q	-74 q	+ 2	-10	+10
19	- 7	+14	+20	- 4	- 3	0	+10 q	+ 3 q	-102 q	+ 2	+ 6	+ 4
20	+ 2	+ 7	+10	+ 4	+ 8	-12	+14 q	+ 9 q	-46	+ 5	+12	+ 8
21	+10	-14	+ 2	+ 7	0	- 7	-14 q	+ 6 q	-32 mu	+11	+ 6	+16
22	+ 9	-12	+ 2	+11	-14	- 5	+ 1 q	+12 q	-12 mu	- 3	+ 6	+14
23	-10	-12	+14 ku	+16	-11	+ 4	- 1 q	+13 q	- 7 mu	- 9	+ 6	+15
24	-17	- 8	+16	-17	-18	+ 2	+10 q	+11 q	-12 mu	- 6	+16	+10
25	-10	- 3	+23	-16	-10	+ 3	+13 q	+ 8 q	-14 mu	+ 4	+21	+13
26	- 4	+ 1	+26	- 6	- 4	+ 2	+14 q	-13 q	+ 8 mu	0	+22	+ 6
27	- 1	+ 6	+32	- 6	+ 3	+ 4	+18 q	-31 q	0 mu	+ 2	+22	+ 2
28	+ 4	+12	+ 4	-19	+ 4	+ 4	+20 q	-14 q	+14 mu	+ 8	-38	+ 6
29	+ 4		- 2	-12	+ 1	+ 8	+29 q	-14 q	+10 mu	+16	- 9	+ 8
30	- 2		-22	- 2	+12	+10	+25 q	- 6 q	+11 mu	+23 ku	+ 6	+ 6
31	+10		-12		+ 8		+28 q	0 q		-36		+ 8

75° west mer. day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1942 (Based on data from Huancayo only)											
1	+ 6	+18	-44	+24	-10	+19	+ 1	+ 2	0	+20	- 6	- 3
2	-10	- 7	-20	- 4	- 7	+13	+ 8	+ 9	+ 1	- 8	0	- 1
3	-15	- 1	-24	- 4	- 1	+ 8	+ 9	+ 8	+13	-12	- 6	0
4	-12	+13	- 3	-18	-16	- 1	+11	+ 8	+11	-13	+ 3	0
5	- 6	-13	-18	-11	-25	+ 8	+13	+ 8	+ 2	- 5	+17	+ 4
6	- 4	-15	0	- 1	- 4	+ 7	+10	+ 4	- 6	- 2	+ 7	+15
7	-12	+ 1	+11	+ 6	+ 1	+ 6	+14	0	- 1	- 1	+13	- 3
8	+ 9	+12	-20	- 4	+18	+10	- 9	+ 4	- 6	- 7	+ 6	- 1
9	+ 4	+13	-22	+ 7	- 2	+13	- 8	+ 5	+ 8	+14	+ 2	-13
10	+ 5	+ 7	- 1	+ 4	+14	+18	+ 3	0	+ 2	+24	+ 8	- 8
11	+12	- 7	- 5	-27	+ 9	- 2	-24	- 4	- 8	+18	+ 8	- 4
12	+10	+ 2	+ 8	0	+ 6	- 6	-15	0	-20	+ 4	+ 5	- 5
13	+10	+13	0	- 8	+18	- 7	- 4	+ 4	- 6	- 1	+ 4	- 5
14	+13	- 3	- 3	+ 4	-10	- 1	+ 1	+ 4	- 6	- 6	+ 5	+ 2
15	- 1	- 1	+ 5	+ 6	- 1	+ 1	- 8	+ 8	- 8	+ 3	+ 7	+ 9
16	- 7	- 4	+ 3	-13	+ 2	- 1	- 5	-12	- 6	- 1	+ 1	- 5
17	-10	+ 7	+17	-13	0	- 1	- 7	-13	-11	+ 3	- 1	+ 8
18	-10	+13	+17	- 8	+ 5	+ 5	- 1	- 4	-10	- 5	+10	+ 8
19	- 2	+19	- 4	+ 1	+10	-15	- 1	- 6	- 4	- 8	+18	+13
20	+ 1	+ 9	+ 7	+ 4	+12	-15	- 1	+ 4	- 5	- 4	+ 1	+16
21	+ 5	- 1	- 7	+ 8	+ 8	- 6	- 3	- 2	- 9	+ 1	+ 6	- 6
22	- 6	- 7	+ 4	+15	-12	+ 1	+ 2	- 1	- 1	+ 7	+ 6	- 4
23	+ 6	-33	+11	+ 1	- 3	0	+ 3	-13	+ 1	+12	-13	-22
24	+ 6	-11	+10	+ 6	+ 4	- 9	- 8	- 8	+ 4	+15	-30	-13
25	+10	- 7	+18	+ 8	+ 3	- 6	- 7	- 6	+ 9	0	-12	- 8
26	+ 3	- 6	+12	+13	+10	- 8	+ 1	- 4	+ 4	+10	-13	- 8
27	- 1	-11	+ 6	- 3	0	+ 5	- 6	+ 4	+ 3	+13	-13	0
28	- 6	- 6	+13	- 2	-17	-10	+ 1	+ 2	+12	-31	-19	+ 6
29	- 6		+13	+ 7	- 4	-10	+ 6	+ 6	+17	-25	-10	+ 9
30	+ 2		+ 1	+11	- 6	- 5	+ 9	+13	+15	-15	- 1	+ 6
31	+ 9		+16		+ 5		+ 8	-15		-12		+16

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* These values depend upon averages from San Juan and Cheltenham except as otherwise indicated by the following symbols for reduced means of other observatories: a = San Juan, Cheltenham, and Honolulu; b = Cheltenham and Honolulu; c = San Juan and Honolulu; d = San Juan, Cheltenham, and Tucson; e = Cheltenham and Tucson; f = San Juan and Tucson; g = San Juan, Cheltenham, and Manila; h = Cheltenham and Manila; k = San Juan, Cheltenham, and Watheroo; m = Cheltenham and Watheroo; n = Tucson only; p = Alibag only; q = Cheltenham only; r = San Juan only; s = magnetic storm; t = reduced interpolated values of either San Juan or Cheltenham; u = difference between San Juan and Cheltenham in excess of ten gammas.

Table 1-G1--Corrections to refer to GMT of observation the values of daily mean departures (P) from monthly means for 75° west meridian time as given in Table G

ΔP	Correction to P with appropriate sign for ΔP = (P for preceding day - P for day of observation) for Greenwich mean hour of observation 05 to 17												
	05	06	07	08	09	10	11	12	13	14	15	16	17
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	1	1	1	1	1	0	0	0	0	0	0	0
3	2	1	1	1	1	1	1	1	1	0	0	0	0
4	2	2	2	2	1	1	1	1	1	0	0	0	0
5	3	2	2	2	2	1	1	1	1	1	0	0	0
6	3	3	3	2	2	2	2	1	1	1	0	0	0
7	4	3	3	3	2	2	2	1	1	1	1	0	0
8	4	4	3	3	3	2	2	2	1	1	1	0	0
9	5	4	4	3	3	3	2	2	2	1	1	0	0
10	5	5	4	4	3	3	2	2	2	1	1	0	0
11	6	5	5	4	4	3	3	2	2	1	1	0	0
12	6	5	5	4	4	4	3	2	2	2	1	1	0
13	7	6	5	5	4	4	3	3	2	2	1	1	0
14	7	6	6	5	5	4	4	3	2	2	1	1	0
15	8	7	6	6	5	4	4	3	3	2	1	1	0
16	8	7	7	6	5	5	4	3	3	2	1	1	0
17	9	8	7	6	6	5	4	4	3	2	1	1	0
18	9	8	8	7	6	5	4	4	3	2	1	1	0
19	10	9	8	7	6	6	5	4	3	2	2	1	0
20	10	9	8	8	7	6	5	4	3	2	2	1	0
21	11	10	9	8	7	6	5	4	4	3	2	1	0
22	11	10	9	8	7	6	6	5	4	3	2	1	0
23	12	11	10	9	8	7	6	5	4	3	2	1	0
24	12	11	10	9	8	7	6	5	4	3	2	1	0
25	13	11	10	9	8	7	6	5	4	3	2	1	0
26	13	12	11	10	9	8	6	5	4	3	2	1	0
27	14	12	11	10	9	8	7	6	5	3	2	1	0
28	14	13	12	10	9	8	7	6	5	4	2	1	0
29	15	13	12	11	10	8	7	6	5	4	2	1	0
30	15	14	13	11	10	9	8	6	5	4	2	1	0
31	16	14	13	12	10	9	8	6	5	4	3	1	0
32	16	15	13	12	11	9	8	7	5	4	3	1	0
33	17	15	14	12	11	10	8	7	6	4	3	1	0
34	17	16	14	13	11	10	8	7	6	4	3	1	0
35	18	16	15	13	12	10	9	7	6	4	3	1	0
36	18	16	15	14	12	11	9	7	6	4	3	2	0
37	19	17	15	14	12	11	9	8	6	5	3	2	0
38	19	17	16	14	13	11	10	8	6	5	3	2	0
39	20	18	16	15	13	11	10	8	7	5	3	2	0
40	20	18	17	15	13	12	10	8	7	5	3	2	0
41	21	19	17	15	14	12	10	9	7	5	3	2	0
42	21	19	18	16	14	12	10	9	7	5	3	2	0
43	22	20	18	16	14	13	11	9	7	5	4	2	0
44	22	20	18	16	15	13	11	9	7	6	4	2	0
45	23	21	19	17	15	13	11	9	8	6	4	2	0
46	23	21	19	17	15	13	12	10	8	6	4	2	0
47	24	22	20	18	16	14	12	10	8	6	4	2	0
48	24	22	20	18	16	14	12	10	8	6	4	2	0
49	25	22	20	18	16	14	12	10	8	6	4	2	0
50	25	23	21	19	17	15	12	10	8	6	4	2	0
	05	04	03	02	01	24	23	22	21	20	19	18	17
ΔP	Correction to P with appropriate sign for ΔP = (P for following day - P for day of observation) for Greenwich mean hour of observation 17 to 05												

Table 1-G2--Corrections to values of P in Table G when observation was made between 12h (75° west meridian time) of last day of one month and 12h (75° WMT) of first day of succeeding month and vice versa

Year	Add algebraically to P for last day of month to reduce to mean of following month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1905	+10	- 4	0	- 6	+ 4	+ 2	+12	+11	- 2[a]	+19[a]	-11	- 1
1906	+ 9	+ 2	- 4	+ 6	0	+ 9	+10	+10	+ 1[a]	+ 5[a]	+14	+ 8
1907	+22	-15	- 8[a]	+ 1[a]	+ 1	+ 8	+ 6	+10	+12	+ 4	- 8	+10
1908	+ 7	+ 8	+ 4	+ 8	+ 2	+ 6	+15	+23	- 4	+ 4	- 4	+19
1909	0	+11	- 9[a]	+11[a]	-12[a]	+ 6	+13	+25	+26	-14	+ 8	- 4
1910	+ 2	+12	+ 8	0	- 1	+ 4	+20	+ 4	+18	- 2	+ 3	+10
1911	+10	+ 5	+ 6	+ 2	+ 2	+ 6	+10	+10	+ 8	0[a]	+ 5[a]	+ 2
1912	+10	+ 6	+10	+ 7	+ 2	+10	+12	+10	+ 6[a]	+ 5[a]	+ 2[a]	+31[a]
1913	+ 5	+ 8	+14	+ 5	+ 2	+10	+13	+14	+10	+ 2[a]	+ 3[a]	+ 6[a]
1914	+ 6	+12	+14	0	+12	+ 7	+12	+ 7	+12	+10	0	+13
1915	+10	+10	+ 6	- 2[a]	+23[a]	+ 4	+12	+10	+16	+14	- 4	+ 6
1916	0	+25	- 4	+ 5	+ 4	+14	+16	+ 7	+ 8	+ 8	+ 6	+12
1917	+ 2	- 1	+ 2	+ 2	+ 2	+ 8	+34	-12	+10	0	+ 6[a]	- 2[a]
1918	+13	+ 7	+ 7	0	- 4	0	+20	+20	+ 8	- 2	+12	0
1919	0	+11	- 2	+10	-14	+ 5	+24	+ 8	+ 8	-12	+ 8	+ 2
1920	+ 7	+24	0	-14	- 1	+ 8	+13	+24	+ 6	- 3	+ 2	- 2
1921	- 3	+ 7	+ 5	+21	- 8[a]	+11[a]	+11	+ 8	+ 2	0	+ 2	+ 8
1922	+ 4	+11	- 2	+ 2	0	+12[a]	+13[a]	+12[a]	0	0	+ 1	+ 4
1923	+ 8	+ 8	- 2	+ 3	+ 5	+ 4	+ 4	+11	+13	- 4	+ 4	+ 9
1924	+ 2	+ 3	0[a]	+ 7[a]	+ 8	0	+ 4	+18	+ 2	+ 2[a]	0[a]	+ 7[a]
1925	+ 4[a]	+ 1[a]	+ 5[a]	+ 4[a]	+12[a]	+ 3[a]	+15[a]	+25[a]	+ 6[a]	- 5[a]	+ 1[a]	+19[a]
1926	+ 8	+ 4	0[a]	- 9[a]	- 1[a]	+ 6[a]	+10	+15	+10	-10	+ 5	+10
1927	+ 2	+ 8	- 2	- 4	-15	+23[a]	+18[a]	+13[a]	+20[a]	-14[a]	+ 6[a]	+ 1[a]
1928	+ 4[a]	+ 8	+ 7	+18	+10	+20	+ 1	+ 8[a]	+17[a]	- 4	- 4	+ 6
1929	+16	+10	-14	0	+ 3	+14	+ 3	+10	+10	+ 5	+ 7	0
1930	+ 6	+ 4	+ 7	+ 1	+ 3	0	+ 6	+14	+ 8	- 2	- 2	- 4
1931	+ 5[a]	+ 7[a]	- 4	+ 6	+ 2	+ 4	+12	+12	+12	+ 6[a]	+ 2[a]	+ 4
1932	+ 5	+ 8	+ 2	0	- 4	0	+10	+10	+ 3	+ 2	+ 8	+ 6
1933	0	+ 6	+ 5	+ 5	- 5	0	+14	+10	0	+ 4	+ 1	+ 4
1934	+ 2	+ 4	- 4	+ 1	- 2	+ 3	+15	+ 8	0	0	+ 8	+ 6
1935	+ 2	+ 2	- 3	- 2	+ 5	+ 2	+ 2	+16	+ 6	- 2	+ 4	+ 2
1936	+ 3	- 2	+ 6	-10	+ 4	+ 2	- 2	+ 8	+11	+ 6	- 6	+ 4
1937	+10	- 2	+ 3	- 2	-10	- 2	+12	+ 3	+22	-12	0	+25
1938	-17	- 6	+ 3	- 4	-16	+10	+ 3	+13	+ 8	- 6	+ 1	-18
1939	+17	+ 2	+10	- 8	-14	+ 7	+ 5	0	+14	-20	- 2	+ 9
1940	- 8	+18	- 1	-17	0	- 4	+ 3	+ 8	+ 4	0	- 6	- 3
1941	+ 1	+27	-21	-11	- 8	+36[a]	-10[a]	+17[a]	- 5	0	-11	-12
1942	- 1	+ 9	- 4	-16	- 6	+ 5	+ 2	+ 6	+ 6	- 2	- 3	..
Year	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
	Subtract algebraically from P for first day of month to reduce to mean of preceding month											

[a] Value from Cheltenham only corrected to mean of San Juan and Cheltenham

Table 1-H--Monthly factors to be multiplied by values of Table G in obtaining for 75th meridian time the daily mean departures from monthly means (P) in geomagnetic north component (X')

Φ °	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
+88	+1.05	+0.68	+0.37	+0.69	+0.52	+0.16	+0.18	+0.15	+0.05	+0.13	+0.18	+0.43
+87	+1.47	+1.16	+0.61	+1.06	+0.72	+0.24	+0.38	+0.22	+0.10	+0.18	+0.30	+0.61
+86	+1.77	+1.58	+0.84	+1.45	+0.93	+0.34	+0.54	+0.33	+0.16	+0.31	+0.44	+0.79
+85	+2.09	+1.88	+1.22	+1.84	+1.10	+0.46	+0.77	+0.41	+0.25	+0.40	+0.61	+0.97
+84	+2.31	+2.06	+1.54	+2.15	+1.26	+0.60	+1.00	+0.62	+0.35	+0.49	+0.80	+1.11
+83	+2.53	+2.27	+1.83	+2.57	+1.39	+0.74	+1.22	+0.80	+0.48	+0.64	+0.99	+1.27
+82	+2.67	+2.40	+2.09	+2.84	+1.51	+0.90	+1.43	+0.97	+0.61	+0.78	+1.23	+1.38
+81	+2.82	+2.51	+2.35	+3.16	+1.63	+1.11	+1.60	+1.18	+0.84	+0.97	+1.55	+1.48
+80	+2.94	+2.58	+2.49	+3.37	+1.75	+1.28	+1.71	+1.37	+1.04	+1.19	+1.94	+1.58
+79	+3.03	+2.67	+2.61	+3.58	+1.83	+1.43	+1.82	+1.55	+1.29	+1.41	+2.23	+1.68
+78	+3.04	+2.73	+2.72	+3.74	+1.90	+1.59	+1.92	+1.68	+1.49	+1.56	+2.47	+1.76
+77	+3.05	+2.77	+2.81	+3.91	+1.98	+1.73	+1.96	+1.82	+1.67	+1.70	+2.67	+1.84
+76	+3.04	+2.82	+2.85	+4.03	+2.05	+1.81	+2.05	+1.94	+1.84	+1.83	+2.83	+1.88
+75	+3.02	+2.82	+2.89	+4.10	+2.11	+1.90	+2.08	+2.03	+2.00	+1.92	+2.96	+1.92
+74	+2.97	+2.78	+2.90	+4.11	+2.15	+1.96	+2.12	+2.08	+2.09	+1.99	+3.03	+1.97
+73	+2.91	+2.76	+2.89	+4.08	+2.15	+2.00	+2.12	+2.17	+2.17	+2.08	+3.06	+2.01
+72	+2.83	+2.71	+2.86	+4.01	+2.15	+2.00	+2.15	+2.19	+2.20	+2.10	+3.05	+2.01
+71	+2.72	+2.64	+2.81	+3.88	+2.12	+1.98	+2.17	+2.20	+2.22	+2.11	+2.99	+2.02
+70	+2.60	+2.55	+2.68	+3.73	+2.09	+1.92	+2.18	+2.19	+2.20	+2.08	+2.89	+2.00
+69	+2.44	+2.47	+2.50	+3.33	+2.02	+1.86	+2.16	+2.15	+2.20	+2.01	+2.74	+1.92
+68	+2.29	+2.34	+2.42	+3.18	+1.95	+1.79	+2.15	+2.08	+2.07	+1.88	+2.47	+1.89
+67	+2.09	+2.19	+2.27	+2.89	+1.85	+1.66	+2.06	+1.99	+1.97	+1.77	+2.14	+1.79
+66	+1.88	+2.00	+2.06	+2.61	+1.74	+1.54	+1.99	+1.94	+1.90	+1.63	+1.85	+1.66
+65	+1.62	+1.80	+1.82	+2.30	+1.59	+1.38	+1.89	+1.72	+1.72	+1.45	+1.60	+1.54
+64	+1.29	+1.60	+1.58	+1.89	+1.43	+1.20	+1.64	+1.57	+1.53	+1.26	+1.43	+1.39
+63	+1.10	+1.36	+1.35	+1.38	+1.26	+1.02	+1.33	+1.30	+1.33	+1.09	+1.28	+1.27
+62	+1.02	+1.20	+1.15	+1.10	+1.05	+0.79	+1.08	+1.06	+1.08	+0.95	+1.15	+1.14
+61	+0.93	+1.07	+0.97	+0.86	+0.82	+0.62	+o.87	+0.91	+0.90	+0.86	+1.04	+1.06
+60	+0.88	+0.97	+0.84	+0.66	+0.70	+0.48	+0.66	+0.82	+0.76	+0.78	+0.96	+0.98
+58	+0.81	+0.83	+0.69	+0.50	+0.52	+0.30	+0.41	+0.62	+0.53	+0.66	+0.89	+0.92
+56	+0.84	+0.75	+0.65	+0.50	+0.47	+0.24	+0.33	+0.59	+0.54	+0.66	+0.83	+0.86
+54	+0.88	+0.75	+0.69	+0.57	+0.50	+0.31	+0.36	+0.60	+0.60	+0.79	+0.81	+0.87
+52	+0.89	+0.83	+0.80	+0.68	+0.60	+0.47	+0.49	+0.66	+0.74	+0.84	+0.83	+0.88
+50	+0.95	+0.92	+0.91	+0.81	+0.77	+0.64	+0.62	+0.76	+0.82	+0.88	+0.86	+0.95
+48	+0.98	+1.00	+1.00	+0.87	+0.83	+0.74	+0.67	+0.85	+0.88	+0.91	+0.94	+0.97
+46	+1.02	+1.04	+1.05	+0.96	+0.89	+0.87	+0.72	+0.88	+0.93	+0.95	+0.99	+0.98
+44	+1.02	+1.07	+1.08	+1.03	+0.93	+0.96	+0.82	+0.92	+0.94	+0.97	+1.01	+1.01
+42	+1.02	+1.09	+1.12	+1.07	+0.97	+1.03	+0.90	+0.95	+0.98	+0.98	+1.04	+1.02
+40	+1.02	+1.11	+1.12	+1.09	+1.01	+1.04	+0.99	+1.01	+1.01	+1.02	+1.05	+1.03
+38	+1.02	+1.12	+1.12	+1.13	+1.08	+1.12	+1.06	+1.05	+1.05	+1.05	+1.08	+1.03
+36	+1.02	+1.13	+1.13	+1.16	+1.12	+1.20	+1.15	+1.10	+1.08	+1.06	+1.09	+1.03
+34	+1.02	+1.16	+1.13	+1.18	+1.16	+1.28	+1.23	+1.17	+1.11	+1.09	+1.12	+1.04
+32	+1.03	+1.17	+1.13	+1.20	+1.20	+1.32	+1.33	+1.21	+1.14	+1.10	+1.14	+1.04
+30	+1.06	+1.18	+1.13	+1.20	+1.23	+1.36	+1.38	+1.24	+1.18	+1.13	+1.15	+1.05
+28	+1.08	+1.20	+1.15	+1.22	+1.25	+1.40	+1.43	+1.32	+1.20	+1.13	+1.16	+1.07
+26	+1.08	+1.21	+1.17	+1.24	+1.28	+1.44	+1.48	+1.35	+1.23	+1.16	+1.17	+1.08
+24	+1.10	+1.21	+1.18	+1.26	+1.28	+1.44	+1.52	+1.38	+1.26	+1.17	+1.18	+1.08
+22	+1.13	+1.21	+1.20	+1.26	+1.28	+1.44	+1.54	+1.39	+1.29	+1.19	+1.19	+1.09
+20	+1.15	+1.21	+1.21	+1.29	+1.28	+1.46	+1.54	+1.45	+1.31	+1.21	+1.20	+1.09
+18	+1.15	+1.21	+1.23	+1.31	+1.29	+1.46	+1.54	+1.46	+1.32	+1.21	+1.20	+1.10
+16	+1.16	+1.24	+1.26	+1.32	+1.30	+1.46	+1.54	+1.46	+1.34	+1.22	+1.21	+1.13
+14	+1.20	+1.26	+1.28	+1.32	+1.30	+1.48	+1.54	+1.46	+1.34	+1.24	+1.22	+1.14
+12	+1.22	+1.26	+1.30	+1.33	+1.31	+1.48	+1.54	+1.46	+1.35	+1.25	+1.23	+1.15
+10	+1.25	+1.29	+1.30	+1.36	+1.31	+1.48	+1.54	+1.46	+1.35	+1.26	+1.23	+1.16
+ 8	+1.25	+1.31	+1.30	+1.37	+1.32	+1.48	+1.54	+1.48	+1.35	+1.28	+1.24	+1.17
+ 6	+1.25	+1.31	+1.30	+1.37	+1.32	+1.48	+1.54	+1.49	+1.35	+1.28	+1.25	+1.17
+ 4	+1.25	+1.33	+1.30	+1.38	+1.32	+1.48	+1.54	+1.51	+1.35	+1.28	+1.28	+1.16
+ 2	+1.25	+1.33	+1.30	+1.38	+1.32	+1.48	+1.54	+1.51	+1.35	+1.28	+1.28	+1.15
0	+1.25	+1.33	+1.30	+1.38	+1.32	+1.48	+1.52	+1.51	+1.34	+1.28	+1.28	+1.14

Table 1-H--Monthly factors to be multiplied by values of Table G in obtaining for 75th meridian time the daily mean departures from monthly means (P) in geomagnetic north component (X')--Concluded

Φ °	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	+1.25	+1.33	+1.30	+1.38	+1.32	+1.48	+1.52	+1.51	+1.34	+1.28	+1.28	+1.14
- 2	+1.25	+1.34	+1.30	+1.38	+1.32	+1.48	+1.48	+1.51	+1.34	+1.27	+1.28	+1.14
- 4	+1.25	+1.34	+1.30	+1.38	+1.32	+1.48	+1.46	+1.51	+1.32	+1.26	+1.25	+1.14
- 6	+1.25	+1.34	+1.30	+1.38	+1.32	+1.48	+1.46	+1.51	+1.31	+1.25	+1.24	+1.12
- 8	+1.24	+1.34	+1.30	+1.38	+1.32	+1.48	+1.45	+1.50	+1.31	+1.24	+1.22	+1.10
-10	+1.22	+1.33	+1.30	+1.38	+1.32	+1.48	+1.45	+1.48	+1.30	+1.23	+1.21	+1.09
-12	+1.22	+1.33	+1.30	+1.38	+1.32	+1.48	+1.45	+1.46	+1.27	+1.22	+1.20	+1.09
-14	+1.22	+1.31	+1.30	+1.38	+1.32	+1.48	+1.44	+1.46	+1.27	+1.21	+1.19	+1.08
-16	+1.20	+1.31	+1.30	+1.38	+1.31	+1.48	+1.43	+1.46	+1.26	+1.19	+1.17	+1.05
-18	+1.19	+1.30	+1.28	+1.38	+1.30	+1.48	+1.43	+1.46	+1.25	+1.18	+1.15	+1.04
-20	+1.16	+1.27	+1.26	+1.38	+1.29	+1.47	+1.43	+1.46	+1.24	+1.17	+1.14	+1.03
-22	+1.15	+1.22	+1.26	+1.37	+1.28	+1.47	+1.43	+1.46	+1.23	+1.16	+1.11	+1.01
-24	+1.14	+1.21	+1.25	+1.35	+1.27	+1.46	+1.43	+1.45	+1.22	+1.13	+1.09	+0.98
-26	+1.12	+1.18	+1.21	+1.33	+1.26	+1.44	+1.43	+1.43	+1.20	+1.10	+1.08	+0.97
-28	+1.08	+1.16	+1.20	+1.32	+1.25	+1.44	+1.43	+1.40	+1.18	+1.10	+1.05	+0.95
-30	+1.09	+1.09	+1.17	+1.32	+1.24	+1.44	+1.43	+1.39	+1.16	+1.07	+1.04	+0.92
-32	+1.05	+1.06	+1.15	+1.29	+1.21	+1.43	+1.41	+1.38	+1.16	+1.06	+1.03	+0.90
-34	+0.97	+1.02	+1.13	+1.26	+1.19	+1.40	+1.40	+1.37	+1.16	+1.02	+1.00	+0.87
-36	+0.90	+0.96	+1.08	+1.25	+1.17	+1.39	+1.39	+1.33	+1.16	+1.01	+0.96	+0.85
-38	+0.83	+0.92	+1.04	+1.21	+1.16	+1.36	+1.38	+1.32	+1.15	+0.99	+0.95	+0.82
-40	+0.78	+0.88	+1.02	+1.18	+1.12	+1.35	+1.38	+1.30	+1.15	+0.98	+0.94	+0.79
-42	+0.71	+0.83	+0.97	+1.13	+1.08	+1.32	+1.35	+1.26	+1.15	+0.95	+0.91	+0.76
-44	+0.67	+0.81	+0.93	+1.10	+1.04	+1.30	+1.33	+1.22	+1.11	+0.92	+0.86	+0.72
-46	+0.56	+0.77	+0.89	+1.06	+1.01	+1.28	+1.31	+1.19	+1.08	+0.86	+0.83	+0.65
-48	+0.52	+0.74	+0.82	+1.01	+0.97	+1.28	+1.28	+1.14	+1.02	+0.78	+0.77	+0.55
-50	+0.48	+0.67	+0.78	+0.97	+0.93	+1.27	+1.20	+1.05	+0.93	+0.73	+0.71	+0.48
-52	+0.39	+0.58	+0.72	+0.92	+0.89	+1.18	+1.13	+0.94	+0.82	+0.61	+0.56	+0.35
-54	+0.28	+0.52	+0.59	+0.87	+0.86	+1.17	+1.11	+0.86	+0.71	+0.51	+0.46	+0.23
-56	+0.26	+0.51	+0.53	+0.72	+0.89	+1.15	+1.06	+0.86	+0.67	+0.46	+0.44	+0.18
-58	+0.32	+0.54	+0.52	+0.72	+0.95	+1.24	+1.03	+0.94	+0.71	+0.46	+0.48	+0.22
-60	+0.52	+0.72	+0.74	+0.87	+1.03	+1.31	+1.11	+1.11	+0.87	+0.60	+0.66	+0.36
-61	+0.70	+0.83	+0.91	+0.96	+1.14	+1.40	+1.19	+1.24	+1.01	+0.80	+0.81	+0.47
-62	+0.84	+0.93	+1.06	+1.04	+1.23	+1.53	+1.29	+1.37	+1.18	+1.00	+0.98	+0.59
-63	+1.06	+1.17	+1.19	+1.19	+1.35	+1.66	+1.45	+1.59	+1.38	+1.31	+1.20	+0.71
-64	+1.28	+1.38	+1.29	+1.39	+1.53	+1.86	+1.63	+1.83	+1.62	+1.71	+1.33	+0.90
-65	+1.46	+1.53	+1.57	+1.59	+1.74	+2.01	+1.99	+2.06	+1.87	+2.04	+1.48	+1.03
-66	+1.57	+1.70	+1.85	+1.79	+1.98	+2.22	+2.39	+2.28	+2.11	+2.36	+1.62	+1.15
-67	+1.67	+1.79	+1.96	+1.96	+2.29	+2.40	+2.63	+2.45	+2.31	+2.65	+1.74	+1.25
-68	+1.69	+1.83	+2.02	+2.08	+2.65	+2.53	+2.90	+2.68	+2.49	+2.88	+1.82	+1.33
-69	+1.74	+1.89	+2.11	+2.21	+2.85	+2.68	+3.11	+2.78	+2.63	+3.15	+1.90	+1.38
-70	+1.71	+1.92	+2.15	+2.30	+3.10	+2.68	+3.30	+2.91	+2.76	+3.38	+1.95	+1.43
-71	+1.70	+1.94	+2.17	+2.33	+3.19	+2.72	+3.45	+3.04	+2.85	+3.52	+1.99	+1.48
-72	+1.69	+1.92	+2.15	+2.32	+3.27	+2.70	+3.58	+3.09	+2.93	+3.63	+2.01	+1.49
-73	+1.68	+1.91	+2.13	+2.26	+3.27	+2.69	+3.70	+3.14	+2.98	+3.69	+2.01	+1.49
-74	+1.68	+1.83	+2.08	+2.19	+3.25	+2.64	+3.78	+3.18	+2.98	+3.72	+2.01	+1.47
-75	+1.67	+1.76	+1.96	+2.12	+3.15	+2.58	+3.85	+3.23	+2.97	+3.68	+1.94	+1.43
-76	+1.61	+1.70	+1.79	+2.01	+3.03	+2.51	+3.86	+3.22	+2.93	+3.64	+1.91	+1.35
-77	+1.57	+1.55	+1.63	+1.91	+2.88	+2.42	+3.86	+3.21	+2.84	+3.54	+1.82	+1.29
-78	+1.51	+1.48	+1.45	+1.72	+2.65	+2.35	+3.86	+3.12	+2.80	+3.39	+1.77	+1.18
-79	+1.41	+1.34	+1.20	+1.52	+2.40	+2.30	+3.83	+3.04	+2.69	+3.23	+1.68	+1.09
-80	+1.34	+1.20	+1.02	+1.31	+2.07	+2.11	+3.72	+2.95	+2.56	+3.05	+1.63	+0.96
-81	+1.24	+1.04	+0.78	+1.08	+1.71	+1.99	+3.55	+2.84	+2.35	+2.85	+1.49	+0.83
-82	+1.13	+0.84	+0.60	+0.86	+1.32	+1.84	+3.39	+2.74	+2.14	+2.57	+1.41	+0.67
-83	+0.97	+0.67	+0.44	+0.66	+1.16	+1.67	+3.24	+2.58	+1.86	+2.23	+1.28	+0.55
-84	+0.79	+0.54	+0.34	+0.54	+0.86	+1.50	+2.93	+2.36	+1.58	+1.95	+1.18	+0.45
-85	+0.69	+0.42	+0.23	+0.43	+0.64	+1.32	+2.59	+2.13	+1.29	+1.62	+1.02	+0.37
-86	+0.42	+0.29	+0.16	+0.34	+0.48	+1.06	+2.24	+1.80	+0.87	+1.31	+0.86	+0.25
-87	+0.32	+0.20	+0.08	+0.22	+0.31	+0.85	+1.84	+1.33	+0.59	+0.99	+0.67	+0.18
-88	+0.14	+0.13	+0.05	+0.14	+0.19	+0.58	+1.33	+0.77	+0.38	+0.63	+0.48	+0.12

Table 1-I--Monthly factors to be multiplied by values of Table G in obtaining for 75th meridian time the daily mean departures from monthly means (P) in geomagnetic vertical component (Z)

Φ °	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
+88	-1.01	-1.75	-1.98	-1.70	-0.79	-0.86	-0.22	-0.16	-0.73	-0.74	-1.86	-1.15
+87	-1.01	-1.73	-1.96	-1.68	-0.78	-0.83	-0.22	-0.20	-0.77	-0.76	-1.90	-1.17
+86	-1.01	-1.71	-1.94	-1.65	-0.76	-0.80	-0.23	-0.26	-0.81	-0.78	-1.94	-1.18
+85	-1.03	-1.70	-1.91	-1.62	-0.75	-0.76	-0.23	-0.29	-0.84	-0.81	-1.98	-1.22
+84	-1.04	-1.70	-1.89	-1.58	-0.73	-0.72	-0.24	-0.33	-0.87	-0.83	-2.02	-1.25
+83	-1.05	-1.68	-1.86	-1.55	-0.71	-0.70	-0.27	-0.36	-0.90	-0.86	-2.06	-1.28
+82	-1.06	-1.67	-1.83	-1.51	-0.68	-0.68	-0.29	-0.41	-0.93	-0.90	-2.09	-1.30
+81	-1.07	-1.66	-1.79	-1.48	-0.66	-0.66	-0.30	-0.43	-0.95	-0.93	-2.12	-1.33
+80	-1.07	-1.65	-1.77	-1.46	-0.64	-0.66	-0.31	-0.45	-0.96	-0.96	-2.15	-1.35
+79	-1.07	-1.64	-1.72	-1.42	-0.62	-0.62	-0.31	-0.48	-0.97	-0.98	-2.18	-1.38
+78	-1.08	-1.62	-1.70	-1.38	-0.59	-0.58	-0.31	-0.52	-0.99	-1.00	-2.21	-1.40
+77	-1.08	-1.60	-1.66	-1.33	-0.57	-0.55	-0.31	-0.54	-1.01	-1.03	-2.24	-1.41
+76	-1.08	-1.59	-1.62	-1.28	-0.54	-0.52	-0.31	-0.57	-1.03	-1.05	-2.27	-1.43
+75	-1.08	-1.57	-1.58	-1.23	-0.52	-0.50	-0.31	-0.58	-1.06	-1.08	-2.28	-1.45
+74	-1.08	-1.55	-1.56	-1.18	-0.50	-0.46	-0.31	-0.58	-1.09	-1.11	-2.30	-1.47
+73	-1.07	-1.52	-1.49	-1.14	-0.45	-0.44	-0.31	-0.60	-1.09	-1.14	-2.31	-1.52
+72	-1.03	-1.50	-1.43	-1.11	-0.43	-0.42	-0.31	-0.61	-1.10	-1.14	-2.33	-1.47
+71	-0.82	-1.38	-1.32	-0.91	-0.35	-0.28	-0.22	-0.60	-0.90	-1.08	-2.21	-1.22
+70	-0.51	-0.83	-0.56	-0.29	-0.14	-0.11	-0.06	-0.40	-0.49	-0.58	-1.04	-0.73
+69	-0.03	+0.16	+0.22	+0.09	+0.10	+0.20	+0.07	-0.01	-0.10	-0.04	-0.13	-0.19
+68	+0.34	+0.68	+0.67	+0.52	+0.31	+0.52	+0.22	+0.38	+0.27	+0.27	+0.34	+0.24
+67	+0.70	+0.91	+0.93	+0.82	+0.47	+0.94	+0.46	+0.77	+0.54	+0.58	+0.65	+0.54
+66	+0.81	+1.03	+1.15	+1.16	+0.62	+1.04	+0.61	+1.02	+0.69	+0.88	+0.89	+0.76
+65	+0.88	+1.09	+1.30	+1.26	+0.74	+1.14	+0.83	+1.24	+0.77	+1.03	+0.99	+0.88
+64	+0.86	+1.12	+1.32	+1.27	+0.74	+1.18	+0.97	+1.26	+0.82	+1.06	+0.99	+0.91
+63	+0.81	+1.08	+1.28	+1.23	+0.73	+1.10	+0.97	+1.26	+0.82	+1.03	+1.00	+0.89
+62	+0.71	+0.98	+1.15	+1.13	+0.70	+1.02	+0.92	+1.24	+0.71	+0.97	+0.89	+0.82
+61	+0.54	+0.73	+0.93	+0.89	+0.53	+0.83	+0.80	+1.06	+0.57	+0.74	+0.62	+0.68
+60	+0.34	+0.46	+0.60	+0.69	+0.39	+0.66	+0.71	+0.86	+0.37	+0.31	+0.34	+0.41
+58	-0.10	+0.07	+0.19	+0.22	+0.12	+0.24	+0.31	+0.22	+0.05	0.00	-0.06	-0.08
+56	-0.17	-0.11	-0.05	0.00	+0.05	+0.16	+0.13	+0.09	-0.05	-0.05	-0.18	-0.16
+54	-0.20	-0.18	-0.14	-0.03	-0.01	+0.04	0.00	-0.02	-0.08	-0.11	-0.21	-0.19
+52	-0.22	-0.24	-0.20	-0.05	-0.04	0.00	-0.10	-0.09	-0.08	-0.15	-0.21	-0.19
+50	-0.24	-0.28	-0.24	-0.06	-0.08	-0.06	-0.13	-0.15	-0.08	-0.17	-0.18	-0.18
+48	-0.26	-0.29	-0.26	-0.08	-0.10	-0.10	-0.18	-0.16	-0.08	-0.18	-0.17	-0.17
+46	-0.23	-0.29	-0.28	-0.11	-0.12	-0.12	-0.19	-0.16	-0.09	-0.16	-0.16	-0.17
+44	-0.22	-0.28	-0.30	-0.13	-0.14	-0.14	-0.19	-0.16	-0.09	-0.15	-0.16	-0.16
+42	-0.20	-0.28	-0.28	-0.13	-0.17	-0.15	-0.18	-0.16	-0.09	-0.14	-0.16	-0.16
+40	-0.20	-0.25	-0.27	-0.13	-0.17	-0.16	-0.16	-0.16	-0.09	-0.12	-0.16	-0.15
+38	-0.17	-0.23	-0.26	-0.13	-0.18	-0.18	-0.14	-0.16	-0.09	-0.11	-0.15	-0.14
+36	-0.14	-0.20	-0.25	-0.13	-0.17	-0.19	-0.12	-0.16	-0.10	-0.11	-0.14	-0.14
+34	-0.11	-0.18	-0.23	-0.12	-0.17	-0.19	-0.11	-0.16	-0.10	-0.11	-0.13	-0.13
+32	-0.09	-0.16	-0.22	-0.11	-0.17	-0.19	-0.11	-0.16	-0.09	-0.11	-0.13	-0.13
+30	-0.09	-0.15	-0.20	-0.10	-0.16	-0.18	-0.10	-0.16	-0.09	-0.11	-0.13	-0.12
+28	-0.08	-0.14	-0.19	-0.08	-0.14	-0.16	-0.10	-0.16	-0.09	-0.11	-0.12	-0.11
+26	-0.07	-0.11	-0.17	-0.06	-0.13	-0.16	-0.10	-0.16	-0.09	-0.11	-0.11	-0.11
+24	-0.06	-0.10	-0.14	-0.04	-0.12	-0.16	-0.10	-0.16	-0.08	-0.10	-0.11	-0.10
+22	-0.05	-0.08	-0.13	-0.01	-0.12	-0.16	-0.10	-0.16	-0.08	-0.09	-0.10	-0.10
+20	-0.03	-0.06	-0.11	0.00	-0.11	-0.16	-0.10	-0.16	-0.08	-0.08	-0.10	-0.09
+18	0.00	-0.05	-0.09	0.00	-0.10	-0.14	-0.10	-0.15	-0.07	-0.07	-0.10	-0.09
+16	0.00	-0.05	-0.07	0.00	-0.08	-0.12	-0.10	-0.15	-0.07	-0.05	-0.10	-0.08
+14	0.00	-0.04	-0.05	0.00	-0.07	-0.10	-0.10	-0.15	-0.06	-0.04	-0.10	-0.08
+12	+0.02	-0.02	-0.03	0.00	-0.05	-0.08	-0.10	-0.13	-0.05	-0.04	-0.09	-0.07
+10	+0.04	-0.01	-0.01	0.00	-0.04	-0.08	-0.10	-0.11	-0.04	-0.03	-0.08	-0.07
+8	+0.05	0.00	0.00	0.00	-0.03	-0.08	-0.10	-0.09	-0.04	-0.01	-0.07	-0.05
+6	+0.06	0.00	+0.01	0.00	-0.02	-0.08	-0.10	-0.07	-0.03	0.00	-0.05	-0.04
+4	+0.07	+0.01	+0.03	0.00	-0.01	-0.06	-0.10	-0.06	-0.02	0.00	-0.04	-0.04
+2	+0.07	+0.03	+0.03	0.00	0.00	-0.04	-0.09	-0.04	-0.01	0.00	-0.02	-0.03
0	+0.07	+0.05	+0.04	0.00	0.00	-0.02	-0.08	-0.01	0.00	0.00	0.00	-0.02

Table 1-I--Monthly factors to be multiplied by values of Table G in obtaining for 75th meridian time the daily mean departures from monthly means (P) in geomagnetic vertical component (Z)--Concluded

Φ	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
° 0	+0.07	+0.05	+0.04	0.00	0.00	-0.02	-0.08	-0.01	0.00	0.00	0.00	-0.02
- 2	+0.07	+0.05	+0.04	+0.01	+0.02	0.00	-0.05	-0.01	0.00	0.00	+0.01	-0.01
- 4	+0.07	+0.06	+0.04	+0.01	+0.04	+0.02	-0.02	0.00	0.00	0.00	+0.02	+0.01
- 6	+0.07	+0.07	+0.04	+0.01	+0.05	+0.04	0.00	0.00	+0.01	0.00	+0.02	+0.03
- 8	+0.07	+0.08	+0.04	+0.02	+0.07	+0.06	+0.02	+0.01	+0.01	0.00	+0.03	+0.04
-10	+0.08	+0.10	+0.04	+0.03	+0.09	+0.09	+0.02	+0.01	+0.01	0.00	+0.04	+0.06
-12	+0.08	+0.11	+0.05	+0.04	+0.10	+0.10	+0.03	+0.02	+0.03	+0.01	+0.05	+0.07
-14	+0.08	+0.12	+0.06	+0.05	+0.10	+0.10	+0.04	+0.04	+0.05	+0.01	+0.06	+0.08
-16	+0.08	+0.12	+0.06	+0.06	+0.10	+0.10	+0.04	+0.04	+0.07	+0.02	+0.07	+0.10
-18	+0.08	+0.13	+0.06	+0.08	+0.11	+0.11	+0.04	+0.06	+0.09	+0.03	+0.09	+0.11
-20	+0.08	+0.14	+0.07	+0.09	+0.11	+0.12	+0.04	+0.07	+0.11	+0.04	+0.10	+0.12
-22	+0.08	+0.14	+0.07	+0.09	+0.12	+0.13	+0.06	+0.09	+0.13	+0.05	+0.11	+0.12
-24	+0.08	+0.14	+0.08	+0.10	+0.12	+0.14	+0.07	+0.11	+0.15	+0.06	+0.12	+0.12
-26	+0.08	+0.14	+0.08	+0.11	+0.12	+0.14	+0.08	+0.12	+0.17	+0.07	+0.13	+0.12
-28	+0.08	+0.14	+0.08	+0.11	+0.13	+0.15	+0.09	+0.15	+0.19	+0.08	+0.14	+0.13
-30	+0.08	+0.14	+0.09	+0.12	+0.13	+0.16	+0.11	+0.17	+0.21	+0.09	+0.15	+0.13
-32	+0.09	+0.14	+0.09	+0.13	+0.14	+0.17	+0.13	+0.19	+0.22	+0.10	+0.15	+0.13
-34	+0.10	+0.14	+0.09	+0.13	+0.14	+0.18	+0.16	+0.22	+0.24	+0.10	+0.15	+0.12
-36	+0.11	+0.14	+0.09	+0.13	+0.15	+0.18	+0.19	+0.24	+0.25	+0.11	+0.15	+0.12
-38	+0.12	+0.14	+0.09	+0.13	+0.16	+0.19	+0.22	+0.27	+0.27	+0.11	+0.16	+0.12
-40	+0.13	+0.14	+0.09	+0.14	+0.17	+0.20	+0.24	+0.29	+0.28	+0.11	+0.16	+0.12
-42	+0.12	+0.14	+0.09	+0.15	+0.17	+0.21	+0.26	+0.30	+0.27	+0.10	+0.14	+0.10
-44	+0.11	+0.14	+0.09	+0.16	+0.18	+0.22	+0.27	+0.31	+0.27	+0.09	+0.12	+0.09
-46	+0.11	+0.13	+0.08	+0.17	+0.19	+0.22	+0.28	+0.31	+0.26	+0.08	+0.11	+0.08
-48	+0.11	+0.13	+0.08	+0.18	+0.19	+0.23	+0.29	+0.31	+0.25	+0.07	+0.09	+0.07
-50	+0.10	+0.13	+0.08	+0.19	+0.19	+0.24	+0.30	+0.32	+0.25	+0.06	+0.08	+0.05
-52	+0.08	+0.08	+0.08	+0.16	+0.22	+0.25	+0.29	+0.28	+0.20	+0.04	+0.04	0.00
-54	0.00	+0.02	+0.08	+0.12	+0.22	+0.26	+0.26	+0.21	+0.14	+0.03	+0.01	-0.03
-56	-0.10	-0.08	+0.05	+0.06	+0.19	+0.22	+0.21	+0.12	+0.05	0.00	-0.05	-0.12
-58	-0.24	-0.19	-0.05	0.00	+0.07	+0.11	+0.13	-0.08	-0.20	-0.20	-0.11	-0.18
-60	-0.56	-0.76	-0.36	-0.34	-0.36	-0.54	-0.43	-0.53	-0.62	-0.63	-0.36	-0.49
-61	-0.66	-0.97	-0.54	-0.69	-0.68	-0.80	-0.66	-0.88	-0.89	-0.85	-0.56	-0.64
-62	-0.72	-1.09	-0.70	-1.07	-0.95	-1.09	-0.90	-1.12	-1.18	-1.03	-0.66	-0.77
-63	-0.80	-1.10	-0.79	-1.18	-1.02	-1.20	-1.02	-1.24	-1.31	-1.11	-0.71	-0.83
-64	-0.76	-1.11	-0.81	-1.17	-1.06	-1.22	-1.10	-1.28	-1.36	-1.15	-0.69	-0.88
-65	-0.66	-1.01	-0.75	-1.10	-1.02	-1.20	-1.10	-1.20	-1.28	-1.09	-0.65	-0.85
-66	-0.48	-0.86	-0.67	-0.97	-0.95	-1.02	-1.03	-1.18	-1.18	-1.05	-0.58	-0.78
-67	-0.30	-0.66	-0.46	-0.72	-0.53	-0.82	-0.71	-0.98	-0.95	-0.75	-0.43	-0.59
-68	-0.18	-0.33	-0.26	-0.30	-0.36	-0.33	-0.43	-0.77	-0.69	-0.47	-0.29	-0.39
-69	-0.01	0.00	+0.11	+0.20	+0.38	+0.32	+0.15	-0.04	+0.16	-0.12	-0.12	-0.20
-70	+0.05	+0.35	+0.48	+0.64	+1.12	+0.98	+0.64	+0.94	+0.58	+0.26	+0.14	+0.08
-71	+0.15	+0.44	+0.88	+0.78	+2.32	+1.64	+1.02	+1.57	+1.02	+0.80	+0.29	+0.21
-72	+0.24	+0.54	+1.07	+1.26	+2.50	+1.97	+1.31	+1.77	+1.47	+1.01	+0.40	+0.31
-73	+0.30	+0.54	+1.10	+1.24	+2.53	+2.00	+1.43	+1.78	+1.55	+1.05	+0.43	+0.34
-74	+0.24	+0.51	+1.06	+1.22	+2.47	+1.97	+1.37	+1.79	+1.60	+1.07	+0.46	+0.35
-75	+0.24	+0.50	+1.04	+1.19	+2.45	+1.95	+1.37	+1.80	+1.63	+1.11	+0.48	+0.37
-76	+0.24	+0.49	+1.01	+1.16	+2.43	+1.91	+1.37	+1.82	+1.67	+1.16	+0.50	+0.39
-77	+0.24	+0.48	+0.99	+1.13	+2.40	+1.90	+1.37	+1.83	+1.71	+1.20	+0.53	+0.41
-78	+0.24	+0.46	+0.97	+1.11	+2.37	+1.88	+1.37	+1.85	+1.74	+1.24	+0.55	+0.43
-79	+0.24	+0.43	+0.95	+1.08	+2.34	+1.84	+1.37	+1.87	+1.78	+1.28	+0.57	+0.46
-80	+0.24	+0.40	+0.94	+1.06	+2.31	+1.81	+1.36	+1.88	+1.82	+1.32	+0.60	+0.48
-81	+0.23	+0.38	+0.92	+1.02	+2.27	+1.78	+1.35	+1.90	+1.85	+1.34	+0.62	+0.50
-82	+0.22	+0.36	+0.91	+0.99	+2.24	+1.74	+1.35	+1.91	+1.88	+1.36	+0.64	+0.51
-83	+0.21	+0.32	+0.87	+0.96	+2.21	+1.71	+1.33	+1.93	+1.91	+1.40	+0.66	+0.52
-84	+0.20	+0.29	+0.84	+0.92	+2.17	+1.67	+1.32	+1.94	+1.94	+1.43	+0.68	+0.54
-85	+0.19	+0.25	+0.81	+0.89	+2.12	+1.63	+1.31	+1.95	+1.96	+1.47	+0.70	+0.57
-86	+0.18	+0.22	+0.78	+0.87	+2.07	+1.58	+1.29	+1.96	+1.99	+1.50	+0.71	+0.60
-87	+0.18	+0.18	+0.75	+0.84	+2.03	+1.56	+1.29	+1.98	+2.01	+1.52	+0.73	+0.62
-88	+0.18	+0.14	+0.72	+0.81	+2.00	+1.54	+1.29	+2.00	+2.04	+1.54	+0.74	+0.65

Table 1-J--Estimated values in gammas for various geomagnetic latitudes of the variation with sunspot-cycle (RV) in the mean yearly value of the geomagnetic north component (X'), 1905-1942

Φ	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
±88	- 5	- 4	- 3	- 1	0	+ 2	+ 4	+ 6	+ 7	+ 6	+ 3	0	- 2	- 4	- 5	- 4	- 3	- 1	+ 2	+ 4
±86	-13	-10	- 7	- 4	0	+ 4	+10	+15	+17	+15	+ 7	- 1	- 6	-10	-13	-11	- 8	- 2	+ 5	+ 9
±84	-19	-14	-10	- 5	- 1	+ 6	+15	+22	+25	+22	+10	- 2	- 9	-15	-19	-16	-11	- 3	+ 7	+14
±82	-25	-19	-13	- 7	- 1	+ 8	+20	+29	+33	+29	+13	- 2	-11	-20	-25	-22	-15	- 3	+10	+18
±80	-33	-25	-18	- 9	- 1	+10	+26	+38	+42	+38	+17	- 3	-15	-26	-32	-28	-19	- 4	+12	+24
±78	-35	-26	-18	- 9	- 1	+10	+27	+40	+45	+40	+17	- 3	-15	-27	-34	-29	-20	- 5	+13	+25
±76	-36	-27	-19	-10	- 1	+11	+28	+41	+46	+41	+18	- 3	-16	-28	-35	-30	-21	- 5	+14	+26
±74	-37	-28	-19	-10	- 1	+11	+28	+42	+47	+42	+18	- 3	-16	-28	-36	-31	-22	- 5	+14	+26
±72	-50	-37	-26	-14	- 2	+15	+39	+58	+64	+57	+25	- 5	-22	-39	-49	-43	-29	- 7	+19	+36
±70	-64	-48	-34	-17	- 2	+19	+50	+74	+83	+73	+32	- 6	-29	-50	-63	-55	-38	- 9	+24	+46
±68	-62	-46	-33	-17	- 2	+19	+48	+71	+79	+70	+31	- 6	-27	-48	-61	-52	-36	- 8	+23	+44
±66	-44	-33	-23	-12	- 1	+13	+34	+51	+57	+50	+22	- 4	-20	-34	-43	-38	-26	- 6	+17	+32
±64	-31	-23	-16	- 8	- 1	+ 9	+24	+35	+39	+35	+15	- 3	-14	-24	-30	-26	-18	- 4	+12	+22
±62	-19	-14	-10	- 5	- 1	+ 6	+15	+22	+24	+21	+ 9	- 2	- 8	-14	-18	-16	-11	- 2	+ 7	+13
±60	- 9	- 7	- 5	- 2	0	+ 3	+ 7	+10	+11	+10	+ 4	- 1	- 4	- 7	- 9	- 7	- 5	- 1	+ 3	+ 6
±58	-10	- 7	- 5	- 3	0	+ 3	+ 8	+11	+13	+11	+ 5	- 1	- 4	- 8	-10	- 8	- 6	- 1	+ 4	+ 7
±56	-12	- 9	- 6	- 3	0	+ 4	+ 9	+14	+16	+14	+ 6	- 1	- 5	- 9	-12	-10	- 7	- 2	+ 5	+ 9
±54	-15	-11	- 8	- 4	0	+ 4	+11	+17	+19	+17	+ 7	- 1	- 6	-11	-14	-12	- 9	- 2	+ 6	+10
±52	-16	-12	- 9	- 4	0	+ 5	+13	+19	+21	+18	+ 8	- 2	- 7	-12	-16	-14	- 9	- 2	+ 6	+12
±50	-17	-13	- 9	- 5	- 1	+ 5	+13	+20	+22	+19	+ 9	- 2	- 8	-13	-17	-14	-10	- 2	+ 6	+12
±48	-18	-14	-10	- 5	- 1	+ 6	+14	+21	+23	+21	+ 9	- 2	- 8	-14	-18	-16	-11	- 2	+ 7	+13
±46	-19	-14	-10	- 5	- 1	+ 6	+15	+22	+24	+21	+ 9	- 2	- 8	-14	-18	-16	-11	- 2	+ 7	+13
±44	-19	-14	-10	- 5	- 1	+ 6	+15	+22	+24	+22	+10	- 2	- 8	-15	-19	-16	-11	- 3	+ 7	+14
±42	-19	-14	-10	- 5	- 1	+ 6	+15	+22	+25	+22	+10	- 2	- 9	-15	-19	-16	-11	- 3	+ 7	+14
±40	-20	-15	-10	- 5	- 1	+ 6	+15	+23	+26	+23	+10	- 2	- 9	-15	-20	-17	-12	- 3	+ 8	+14
±38	-20	-15	-11	- 5	- 1	+ 6	+16	+23	+26	+23	+10	- 2	- 9	-16	-20	-17	-12	- 3	+ 8	+14
±36	-21	-15	-11	- 6	- 1	+ 6	+16	+24	+27	+24	+10	- 2	- 9	-16	-20	-18	-12	- 3	+ 8	+15
±34	-21	-16	-11	- 6	- 1	+ 6	+16	+24	+27	+24	+11	- 2	- 9	-16	-21	-18	-12	- 3	+ 8	+15
±32	-22	-16	-11	- 6	- 1	+ 7	+17	+25	+28	+25	+11	- 2	-10	-17	-21	-18	-13	- 3	+ 8	+16
±30	-22	-16	-12	- 6	- 1	+ 7	+17	+25	+28	+25	+11	- 2	-10	-17	-22	-19	-13	- 3	+ 8	+16
±28	-22	-17	-12	- 6	- 1	+ 7	+17	+26	+29	+25	+11	- 2	-10	-17	-22	-19	-13	- 3	+ 8	+16
±26	-23	-17	-12	- 6	- 1	+ 7	+18	+26	+29	+26	+11	- 2	-10	-18	-22	-19	-13	- 3	+ 9	+16
±24	-23	-17	-12	- 6	- 1	+ 7	+18	+27	+30	+26	+12	- 2	-10	-18	-23	-20	-13	- 3	+ 9	+17
±22	-23	-17	-12	- 6	- 1	+ 7	+18	+27	+30	+27	+12	- 2	-10	-18	-23	-20	-14	- 3	+ 9	+17
±20	-24	-18	-13	- 6	- 1	+ 7	+18	+27	+31	+27	+12	- 2	-11	-18	-23	-20	-14	- 3	+ 9	+17
±18	-24	-18	-13	- 7	- 1	+ 7	+19	+28	+31	+28	+12	- 2	-11	-19	-24	-21	-14	- 3	+ 9	+17
±16	-25	-18	-13	- 7	- 1	+ 7	+19	+28	+32	+28	+12	- 2	-11	-19	-24	-21	-14	- 3	+ 9	+18
±14	-25	-19	-13	- 7	- 1	+ 8	+19	+29	+32	+29	+13	- 2	-11	-19	-25	-21	-15	- 3	+10	+18
±12	-26	-19	-14	- 7	- 1	+ 8	+20	+30	+33	+29	+13	- 2	-11	-20	-25	-22	-15	- 3	+10	+18
±10	-26	-19	-14	- 7	- 1	+ 8	+20	+30	+33	+30	+13	- 2	-12	-20	-25	-22	-15	- 3	+10	+19
± 8	-26	-20	-14	- 7	- 1	+ 8	+20	+30	+34	+30	+13	- 2	-12	-20	-26	-22	-15	- 3	+10	+19
± 6	-26	-20	-14	- 7	- 1	+ 8	+20	+30	+34	+30	+13	- 2	-12	-20	-26	-22	-16	- 4	+10	+19
± 4	-26	-20	-14	- 7	- 1	+ 8	+20	+30	+34	+30	+13	- 2	-12	-20	-26	-22	-16	- 4	+10	+19
± 2	-26	-20	-14	- 7	- 1	+ 8	+20	+30	+34	+30	+13	- 2	-12	-20	-26	-22	-16	- 4	+10	+19
0	-26	-20	-14	- 7	- 1	+ 8	+20	+30	+34	+30	+13	- 2	-12	-20	-26	-22	-16	- 4	+10	+19

Table 1-J--Estimated values in gammas for various geomagnetic latitudes of the variation with sunspot-cycle (RV) in the mean yearly value of the geomagnetic north component (X'), 1905-1942--Concluded

Φ	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
±88	+5	+3	+1	0	-2	-3	-3	-2	-1	+1	+1	+2	+2	+2	+1	0	-1	-2
±86	+12	+7	+3	-1	-5	-8	-8	-6	-3	+1	+3	+5	+5	+4	+2	-1	-3	-5
±84	+18	+11	+4	-1	-7	-13	-12	-9	-4	+2	+5	+7	+7	+6	+3	-1	-4	-7
±82	+23	+14	+5	-1	-9	-17	-16	-12	-6	+3	+7	+9	+10	+8	+4	-2	-6	-10
±80	+30	+18	+7	-2	-12	-22	-21	-15	-7	+4	+8	+12	+12	+10	+5	-2	-8	-12
±78	+31	+19	+7	-2	-12	-23	-22	-16	-8	+4	+9	+13	+13	+10	+5	-3	-8	-13
±76	+32	+20	+7	-2	-13	-23	-23	-16	-8	+4	+9	+13	+14	+11	+5	-3	-8	-14
±74	+33	+20	+8	-2	-13	-24	-24	-17	-8	+4	+9	+14	+14	+11	+6	-3	-8	-14
±72	+45	+27	+10	-3	-18	-33	-32	-23	-11	+5	+13	+19	+19	+15	+8	-4	-11	-19
±70	+58	+35	+13	-4	-23	-42	-41	-30	-14	+7	+17	+24	+24	+19	+10	-5	-15	-24
±68	+56	+34	+13	-3	-22	-40	-40	-28	-14	+7	+16	+23	+23	+19	+9	-5	-14	-23
±66	+40	+24	+9	-3	-16	-29	-28	-20	-10	+5	+11	+16	+17	+13	+7	-3	-10	-17
±64	+28	+17	+6	-2	-11	-20	-20	-14	-7	+3	+8	+11	+12	+9	+5	-2	-7	-12
±62	+17	+10	+4	-1	-7	-12	-12	-9	-4	+2	+5	+7	+7	+6	+3	-1	-4	-7
±60	+8	+5	+2	0	-3	-6	-6	-4	-2	+1	+2	+3	+3	+3	+1	-1	-2	-3
±58	+9	+5	+2	-1	-4	-6	-6	-5	-2	+1	+3	+4	+4	+3	+1	-1	-2	-4
±56	+11	+7	+3	-1	-4	-8	-8	-6	-3	+1	+3	+5	+5	+4	+2	-1	-3	-5
±54	+13	+8	+3	-1	-5	-10	-9	-7	-3	+2	+4	+5	+6	+4	+2	-1	-3	-6
±52	+15	+9	+3	-1	-6	-11	-10	-7	-4	+2	+4	+6	+6	+5	+2	-1	-4	-6
±50	+15	+9	+4	-1	-6	-11	-11	-8	-4	+2	+4	+6	+6	+5	+3	-1	-4	-6
±48	+17	+10	+4	-1	-7	-12	-12	-8	-4	+2	+5	+7	+7	+6	+3	-1	-4	-7
±46	+17	+10	+4	-1	-7	-12	-12	-9	-4	+2	+5	+7	+7	+6	+3	-1	-4	-7
±44	+17	+10	+4	-1	-7	-12	-12	-9	-4	+2	+5	+7	+7	+6	+3	-1	-4	-7
±42	+18	+11	+4	-1	-7	-13	-12	-9	-4	+2	+5	+7	+7	+6	+3	-1	-4	-7
±40	+18	+11	+4	-1	-7	-13	-13	-9	-4	+2	+5	+7	+8	+6	+3	-2	-4	-8
±38	+18	+11	+4	-1	-7	-13	-13	-9	-4	+2	+5	+7	+8	+6	+3	-2	-5	-8
±36	+19	+11	+4	-1	-7	-13	-13	-10	-5	+2	+5	+8	+8	+6	+3	-2	-5	-8
±34	+19	+12	+4	-1	-8	-14	-14	-10	-5	+2	+5	+8	+8	+6	+3	-2	-5	-8
±32	+20	+12	+5	-1	-8	-14	-14	-10	-5	+2	+6	+8	+8	+7	+3	-2	-5	-8
±30	+20	+12	+5	-1	-8	-14	-14	-10	-5	+2	+6	+8	+8	+7	+3	-2	-5	-8
±28	+20	+12	+5	-1	-8	-15	-14	-10	-5	+2	+6	+8	+8	+7	+3	-2	-5	-8
±26	+21	+12	+5	-1	-8	-15	-15	-10	-5	+2	+6	+8	+9	+7	+3	-2	-5	-9
±24	+21	+13	+5	-1	-8	-15	-15	-11	-5	+2	+6	+9	+9	+7	+3	-2	-5	-9
±22	+21	+13	+5	-1	-8	-15	-15	-11	-5	+2	+6	+9	+9	+7	+4	-2	-5	-9
±20	+22	+13	+5	-1	-9	-16	-15	-11	-5	+3	+6	+9	+9	+7	+4	-2	-5	-9
±18	+22	+13	+5	-1	-9	-16	-16	-11	-5	+3	+6	+9	+9	+7	+4	-2	-6	-9
±16	+22	+13	+5	-1	-9	-16	-16	-11	-5	+3	+6	+9	+9	+7	+4	-2	-6	-9
±14	+23	+14	+5	-1	-9	-16	-16	-12	-6	+3	+6	+9	+10	+8	+4	-2	-6	-10
±12	+23	+14	+5	-1	-9	-17	-16	-12	-6	+3	+7	+10	+10	+8	+4	-2	-6	-10
±10	+24	+14	+5	-1	-9	-17	-17	-12	-6	+3	+7	+10	+10	+8	+4	-2	-6	-10
±8	+24	+14	+5	-1	-9	-17	-17	-12	-6	+3	+7	+10	+10	+8	+4	-2	-6	-10
±6	+24	+14	+6	-2	-10	-17	-17	-12	-6	+3	+7	+10	+10	+8	+4	-2	-6	-10
±4	+24	+14	+6	-2	-10	-17	-17	-12	-6	+3	+7	+10	+10	+8	+4	-2	-6	-10
±2	+24	+14	+6	-2	-10	-17	-17	-12	-6	+3	+7	+10	+10	+8	+4	-2	-6	-10
0	+24	+14	+6	-2	-10	-17	-17	-12	-6	+3	+7	+10	+10	+8	+4	-2	-6	-10

Table 1-K--Estimated values in gammas for various geomagnetic latitudes of the variation with sunspot-cycle (RV) in the mean yearly value of the geomagnetic vertical component (Z), 1905-1942

Φ	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
±88	+18	+13	+9	+5	+1	-5	-14	-20	-23	-20	-9	+2	+8	+14	+17	+15	+10	+2	-7	-13
±86	+19	+14	+10	+5	+1	-6	-15	-22	-24	-22	-10	+2	+8	+15	+19	+16	+11	+3	-7	-14
±84	+20	+15	+11	+6	+1	-6	-16	-23	-26	-23	-10	+2	+9	+16	+20	+17	+12	+3	-8	-15
±82	+22	+16	+11	+6	+1	-7	-17	-25	-28	-25	-11	+2	+10	+17	+21	+18	+13	+3	-8	-16
±80	+23	+17	+12	+6	+1	-7	-18	-27	-30	-26	-12	+2	+10	+18	+23	+20	+13	+3	-9	-17
±78	+24	+18	+13	+7	+1	-7	-19	-28	-31	-27	-12	+2	+11	+19	+24	+20	+14	+3	-9	-17
±76	+25	+19	+13	+7	+1	-8	-20	-29	-33	-29	-13	+2	+11	+20	+25	+22	+15	+3	-10	-18
±74	+27	+20	+14	+7	+1	-8	-21	-31	-34	-31	-13	+3	+12	+21	+26	+23	+16	+4	-10	-19
±72	+28	+21	+15	+8	+1	-8	-22	-32	-36	-32	-14	+3	+13	+22	+28	+24	+16	+4	-11	-20
±70	+16	+12	+9	+4	0	-5	-13	-19	-21	-18	-8	+2	+7	+12	+16	+14	+9	+2	-6	-12
±68	-16	-12	-9	-4	0	+5	+13	+19	+21	+18	+8	-2	-7	-12	-16	-14	-9	-2	+6	+12
±66	-22	-16	-11	-6	-1	+7	+17	+25	+28	+25	+11	-2	-10	-17	-21	-18	-13	-3	+8	+16
±64	-22	-16	-11	-6	-1	+7	+17	+25	+28	+25	+11	-2	-10	-17	-21	-18	-13	-3	+8	+16
±62	-17	-12	-9	-5	-1	+5	+13	+19	+21	+19	+8	-2	-7	-13	-16	-14	-10	-2	+6	+12
±60	-6	-4	-3	-2	0	+2	+5	+7	+7	+7	+3	-1	-3	-4	-6	-5	-3	-1	+2	+4
±58	-1	0	0	0	0	0	0	+1	+1	+1	0	0	0	0	-1	0	0	0	0	0
±56	+1	+1	+1	0	0	0	-1	-2	-2	-2	-1	0	0	+1	+1	+1	+1	0	0	-1
±54	+2	+1	+1	+1	0	-1	-1	-2	-2	-2	-1	0	+1	+1	+2	+2	+1	0	-1	-1
±52	+2	+2	+1	+1	0	-1	-2	-3	-3	-3	-1	0	+1	+2	+2	+2	+1	0	-1	-2
±50	+3	+2	+1	+1	0	-1	-2	-3	-3	-3	-1	0	+1	+2	+3	+2	+2	0	-1	-2
±48	+3	+2	+1	+1	0	-1	-2	-3	-3	-3	-1	0	+1	+2	+3	+2	+2	0	-1	-2
±46	+3	+2	+2	+1	0	-1	-2	-3	-4	-3	-1	0	+1	+2	+3	+2	+2	0	-1	-2
±44	+3	+2	+2	+1	0	-1	-2	-3	-4	-3	-1	0	+1	+2	+3	+2	+2	0	-1	-2
±42	+3	+2	+2	+1	0	-1	-2	-4	-4	-4	-2	0	+1	+2	+3	+3	+2	0	-1	-2
±40	+3	+2	+2	+1	0	-1	-2	-4	-4	-4	-2	0	+1	+2	+3	+3	+2	0	-1	-2
±38	+3	+2	+2	+1	0	-1	-2	-4	-4	-4	-2	0	+1	+2	+3	+3	+2	0	-1	-2
±36	+3	+2	+2	+1	0	-1	-2	-4	-4	-4	-2	0	+1	+2	+3	+3	+2	0	-1	-2
±34	+3	+2	+2	+1	0	-1	-2	-4	-4	-4	-2	0	+1	+2	+3	+3	+2	0	-1	-2
±32	+3	+2	+2	+1	0	-1	-2	-4	-4	-4	-2	0	+1	+2	+3	+3	+2	0	-1	-2
±30	+3	+2	+2	+1	0	-1	-2	-3	-4	-3	-1	0	+1	+2	+3	+2	+2	0	-1	-2
±28	+3	+2	+2	+1	0	-1	-2	-3	-4	-3	-1	0	+1	+2	+3	+2	+2	0	-1	-2
±26	+3	+2	+1	+1	0	-1	-2	-3	-3	-3	-1	0	+1	+2	+3	+2	+2	0	-1	-2
±24	+2	+2	+1	+1	0	-1	-2	-3	-3	-3	-1	0	+1	+2	+2	+2	+1	0	-1	-2
±22	+2	+2	+1	+1	0	-1	-2	-2	-3	-2	-1	0	+1	+2	+2	+2	+1	0	-1	-2
±20	+2	+1	+1	+1	0	-1	-1	-2	-2	-2	-1	0	+1	+1	+2	+2	+1	0	-1	-1
±18	+2	+1	+1	0	0	0	-1	-2	-2	-2	-1	0	+1	+1	+2	+1	+1	0	-1	-1
±16	+2	+1	+1	0	0	0	-1	-2	-2	-2	-1	0	+1	+1	+2	+1	+1	0	-1	-1
±14	+1	+1	+1	0	0	0	-1	-2	-2	-2	-1	0	+1	+1	+1	+1	+1	0	0	-1
±12	+1	+1	+1	0	0	0	-1	-1	-1	-1	-1	0	0	+1	+1	+1	+1	0	0	-1
±10	+1	+1	0	0	0	0	-1	-1	-1	-1	0	0	0	+1	+1	+1	0	0	0	-1
± 8	+1	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	+1	0	0	0	0	0
± 6	+1	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	+1	0	0	0	0	0
± 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
± 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 1-K--Estimated values in gammas for various geomagnetic latitudes of the variation with sunspot-cycle (RV) in the mean yearly value of the geomagnetic vertical component (Z), 1905-1942--Concluded

Φ	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
±88	-16	-10	- 4	+ 1	+ 6	+12	+11	+ 8	+ 4	- 2	- 5	- 7	- 7	- 5	- 3	+ 1	+ 4	+ 7
±86	-17	-10	- 4	+ 1	+ 7	+12	+12	+ 9	+ 4	- 2	- 5	- 7	- 7	- 6	- 3	+ 1	+ 4	+ 7
±84	-18	-11	- 4	+ 1	+ 7	+13	+13	+ 9	+ 4	- 2	- 5	- 8	- 8	- 6	- 3	+ 2	+ 5	+ 8
±82	-20	-12	- 5	+ 1	+ 8	+14	+14	+10	+ 5	- 2	- 6	- 8	- 8	- 7	- 3	+ 2	+ 5	+ 8
±80	-21	-13	- 5	+ 1	+ 8	+15	+15	+11	+ 5	- 2	- 6	- 9	- 9	- 7	- 3	+ 2	+ 5	+ 9
±78	-22	-13	- 5	+ 1	+ 9	+16	+15	+11	+ 5	- 3	- 6	- 9	- 9	- 7	- 4	+ 2	+ 5	+ 9
±76	-23	-14	- 5	+ 1	+ 9	+17	+16	+12	+ 6	- 3	- 7	- 9	-10	- 8	- 4	+ 2	+ 6	+10
±74	-24	-15	- 6	+ 2	+10	+17	+17	+12	+ 6	- 3	- 7	-10	-10	- 8	- 4	+ 2	+ 6	+10
±72	-25	-15	- 6	+ 2	+10	+18	+18	+13	+ 6	- 3	- 7	-10	-11	- 8	- 4	+ 2	+ 6	+11
±70	-15	- 9	- 3	+ 1	+ 6	+11	+10	+ 7	+ 4	- 2	- 4	- 6	- 6	- 5	- 2	+ 1	+ 4	+ 6
±68	+15	+ 9	+ 3	- 1	- 6	-11	-10	- 7	- 4	+ 2	+ 4	+ 6	+ 6	+ 5	+ 2	- 1	- 4	- 6
±66	+20	+12	+ 5	- 1	- 8	-14	-14	-10	- 5	+ 2	+ 6	+ 8	+ 8	+ 7	+ 3	- 2	- 5	- 8
±64	+20	+12	+ 5	- 1	- 8	-14	-14	-10	- 5	+ 2	+ 6	+ 8	+ 8	+ 7	+ 3	- 2	- 5	- 8
±62	+15	+ 9	+ 3	- 1	- 6	-11	-11	- 8	- 4	+ 2	+ 4	+ 6	+ 6	+ 5	+ 3	- 1	- 4	- 6
±60	+ 5	+ 3	+ 1	0	- 2	- 4	- 4	- 3	- 1	+ 1	+ 1	+ 2	+ 2	+ 2	+ 1	0	- 1	- 2
±58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
±56	- 1	- 1	0	0	0	+ 1	+ 1	+ 1	0	0	0	0	0	0	0	0	0	0
±54	- 2	- 1	0	0	+ 1	+ 1	+ 1	+ 1	0	0	0	- 1	- 1	- 1	0	0	0	+ 1
±52	- 2	- 1	0	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±50	- 2	- 1	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±48	- 2	- 1	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±46	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±44	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±42	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±40	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±38	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±36	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±34	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±32	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±30	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±28	- 3	- 2	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±26	- 2	- 1	- 1	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±24	- 2	- 1	0	0	+ 1	+ 2	+ 2	+ 1	+ 1	0	- 1	- 1	- 1	- 1	0	0	+ 1	+ 1
±22	- 2	- 1	0	0	+ 1	+ 1	+ 1	+ 1	0	0	- 1	- 1	- 1	- 1	0	0	0	+ 1
±20	- 2	- 1	0	0	+ 1	+ 1	+ 1	+ 1	0	0	0	- 1	- 1	- 1	0	0	0	+ 1
±18	- 1	- 1	0	0	+ 1	+ 1	+ 1	+ 1	0	0	0	- 1	- 1	0	0	0	0	+ 1
±16	- 1	- 1	0	0	+ 1	+ 1	+ 1	+ 1	0	0	0	- 1	- 1	0	0	0	0	+ 1
±14	- 1	- 1	0	0	0	+ 1	+ 1	+ 1	0	0	0	0	0	0	0	0	0	0
±12	- 1	- 1	0	0	0	+ 1	+ 1	0	0	0	0	0	0	0	0	0	0	0
±10	- 1	0	0	0	0	+ 1	+ 1	0	0	0	0	0	0	0	0	0	0	0
± 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
± 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
± 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
± 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 1-J1 and 1-K1--Corrections to be added to values of RV at January 1 (Tables J and K) to obtain values of RV applying to middle of month

RV	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	0	0	0	0	0	0	1	1	1	1	1	1
2	0	0	0	1	1	1	1	1	1	2	2	2
3	0	0	1	1	1	1	2	2	2	2	3	3
4	0	0	1	1	2	2	2	2	3	3	4	4
5	0	1	1	1	2	2	3	3	4	4	4	5
6	0	1	1	2	2	3	3	4	4	5	5	6
7	0	1	1	2	3	3	4	4	5	6	6	7
8	0	1	2	2	3	4	4	5	6	6	7	8
9	0	1	2	3	3	4	5	6	6	7	8	9
10	0	1	2	3	4	5	5	6	7	8	9	10
11	0	1	2	3	4	5	6	7	8	9	10	11
12	0	1	3	3	5	6	6	7	9	9	11	12
13	1	2	3	4	5	6	7	8	9	10	11	12
14	1	2	3	4	5	6	8	9	10	11	12	13
15	1	2	3	4	6	7	8	9	11	12	13	14
16	1	2	3	5	6	7	9	10	11	13	14	15
17	1	2	4	5	7	8	9	11	12	13	15	16
18	1	2	4	5	7	8	10	11	13	14	16	17
19	1	2	4	6	7	9	10	12	13	15	17	18
20	1	2	4	6	8	9	11	13	14	16	18	19
21	1	3	4	6	8	10	11	13	15	17	18	20
22	1	3	5	6	8	10	12	14	16	17	19	21
23	1	3	5	7	9	11	12	14	16	18	20	22
24	1	3	5	7	9	11	13	15	17	19	21	23
25	1	3	5	7	10	12	14	16	18	20	22	24
26	1	3	5	8	10	12	14	16	18	21	23	25
27	1	3	6	8	10	12	15	17	19	21	24	26
28	1	3	6	8	11	13	15	17	20	22	25	27
29	1	3	6	8	11	13	16	18	21	23	26	28
30	1	4	6	9	11	14	16	19	21	24	26	29
31	1	4	7	9	12	14	17	19	22	24	27	30
32	1	4	7	9	12	15	17	20	23	25	28	31
33	1	4	7	10	13	15	18	20	23	26	29	32
34	1	4	7	10	13	16	18	21	24	27	30	33
35	1	4	7	10	13	16	19	22	25	28	31	34
36	1	4	8	10	14	17	19	22	26	28	32	35
37	1	4	8	11	14	17	20	23	26	29	33	36
38	2	5	8	11	14	17	21	24	27	30	33	36
39	2	5	8	11	15	18	21	24	28	31	34	37
40	2	5	8	12	15	18	22	25	28	32	35	38
41	2	5	9	12	16	19	22	25	29	32	36	39

Table 1-L--Monthly mean solar daily variation on quiet days (S_q), geomagnetic north component (X') in gammas, 1922-33

Geographic latitude	At local mean hour																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
January																									
+60	-2	-2	-2	-1	0	+2	+4	+4	+2	-1	-3	-5	-5	-3	-1	0	+1	+2	+2	+3	+3	+2	0	-1	-2
+50	0	+1	+1	+2	+3	+4	+5	+5	+3	-1	-6	-10	-11	-9	-4	0	+2	+4	+4	+4	+3	+2	0	0	0
+40	+4	+4	+5	+5	+5	+5	+7	+8	+5	-2	-13	-22	-25	-20	-9	+1	+7	+8	+7	+5	+4	+4	+4	+4	+4
+30	-2	0	+2	+3	+3	+4	+6	+8	+7	+2	-6	-12	-14	-10	-3	+2	+4	+4	+2	+2	+1	+1	-1	-2	-2
+20	-8	-7	-6	-5	-3	-2	0	+2	+5	+8	+12	+14	+14	+11	+7	+3	0	-2	-4	-6	-7	-8	-9	-8	-8
+10	-21	-20	-18	-16	-15	-14	-13	-8	+4	+21	+38	+49	+49	+38	+22	+8	-2	-6	-9	-12	-15	-18	-20	-21	-21
0	-28	-25	-22	-19	-17	-17	-16	-8	+8	+31	+53	+66	+63	+46	+25	+6	-5	-10	-13	-16	-21	-25	-28	-29	-28
-10	-30	-26	-20	-16	-14	-14	-12	-5	+12	+36	+58	+69	+62	+42	+19	+1	-8	-10	-12	-16	-23	-29	-32	-33	-30
-20	-28	-23	-17	-12	-9	-8	-6	+1	+14	+30	+45	+52	+48	+34	+17	+3	-4	-7	-9	-13	-19	-26	-30	-31	-28
-30	-1	0	+1	+1	0	0	-1	-2	-2	-1	0	+1	+2	+2	+1	-1	-1	0	+1	+2	+2	0	-2	-2	-1
-40	+3	+2	+1	+1	+2	+3	+2	-1	-8	-15	-19	-18	-13	-5	+2	+6	+9	+9	+9	+8	+7	+6	+5	+4	+3
-50	+6	+5	+3	+3	+3	+3	+1	-5	-13	-22	-26	-24	-17	-7	+2	+8	+11	+12	+12	+11	+10	+9	+8	+8	+6
-60	+8	+6	+5	+3	+2	+1	-2	-7	-15	-21	-23	-20	-13	-5	+1	+4	+5	+7	+9	+11	+12	+11	+10	+9	+8
February																									
+60	0	0	-1	-1	-1	+1	+4	+5	+3	-2	-7	-10	-10	-7	-3	0	+1	+2	+4	+6	+6	+5	+4	+2	0
+50	+2	+2	+2	+2	+2	+4	+6	+6	+2	-4	-10	-14	-14	-10	-6	-2	+1	+3	+5	+6	+6	+5	+4	+2	+2
+40	+4	+5	+5	+5	+5	+5	+6	+6	+2	-4	-12	-17	-18	-15	-9	-3	+2	+5	+7	+7	+5	+4	+2	+2	+4
+30	-2	-1	0	+1	+2	+4	+5	+5	+4	+2	-1	-4	-4	-4	-2	-1	0	0	+1	+1	0	-1	-2	-2	-2
+20	-10	-9	-8	-7	-7	-5	-3	0	+4	+10	+16	+21	+22	+19	+13	+6	0	-4	-6	-7	-9	-10	-11	-11	-10
+10	-21	-22	-21	-20	-19	-19	-18	-13	0	+18	+38	+51	+53	+44	+28	+14	+3	-4	-8	-12	-16	-18	-19	-20	-21
0	-26	-27	-27	-25	-23	-23	-23	-18	-2	+22	+47	+64	+66	+53	+35	+17	+6	-2	-8	-15	-20	-23	-24	-24	-26
-10	-29	-30	-28	-24	-20	-20	-21	-16	-2	+22	+46	+61	+62	+51	+35	+19	+8	0	-8	-14	-19	-22	-24	-26	-29
-20	-19	-20	-18	-14	-10	-8	-7	-5	+2	+14	+27	+36	+36	+30	+21	+12	+5	-1	-7	-12	-15	-16	-16	-17	-19
-30	+1	+2	+2	+2	+3	+3	+3	+1	-3	-6	-7	-6	-3	-1	0	+1	+1	+2	+2	+2	+1	0	0	+1	+1
-40	+7	+6	+6	+6	+7	+8	+7	+2	-7	-17	-24	-24	-19	-10	-2	+4	+6	+7	+7	+6	+6	+6	+6	+7	+7
-50	+8	+7	+5	+4	+4	+3	0	-6	-15	-25	-30	-29	-21	-9	+2	+9	+13	+14	+13	+12	+11	+11	+10	+10	+8
-60	+9	+8	+7	+5	+2	0	-5	-11	-18	-24	-27	-25	-18	-9	0	+7	+10	+12	+13	+13	+14	+13	+12	+10	+9
March																									
+60	+4	+3	+2	+1	+1	+3	+4	+3	-2	-9	-15	-17	-14	-9	-3	+1	+2	+4	+5	+7	+8	+8	+7	+6	+4
+50	+7	+6	+5	+4	+4	+5	+6	+4	-2	-10	-17	-19	-16	-11	-5	-2	+1	+3	+5	+6	+7	+7	+6	+7	+7
+40	+6	+7	+7	+7	+7	+8	+8	+5	-2	-10	-18	-21	-20	-14	-7	-1	+4	+6	+7	+6	+4	+3	+3	+4	+6
+30	0	+1	+2	+3	+3	+4	+3	+1	-1	-3	-3	-2	-1	0	+1	0	-1	-2	-1	-1	-1	-1	-1	0	0
+20	-12	-11	-10	-9	-8	-7	-6	-3	+3	+11	+21	+28	+29	+24	+15	+6	-1	-6	-8	-9	-11	-12	-13	-12	-12
+10	-22	-24	-25	-24	-23	-22	-21	-14	-1	+19	+40	+54	+56	+46	+30	+15	+5	-2	-6	-10	-14	-17	-19	-20	-22
0	-24	-29	-31	-31	-30	-28	-27	-19	-2	+24	+50	+66	+66	+53	+34	+17	+5	-2	-8	-13	-17	-18	-18	-20	-24
-10	-20	-27	-30	-29	-27	-28	-27	-20	-2	+24	+50	+65	+63	+49	+31	+15	+4	-5	-12	-16	-17	-14	-12	-14	-20
-20	-10	-16	-19	-19	-19	-19	-19	-14	-2	+16	+34	+44	+42	+32	+19	+8	0	-6	-10	-12	-11	-7	-5	-6	-10
-30	+2	0	-1	-1	-1	0	-1	-2	-3	-3	0	+2	+4	+4	+2	0	-2	-3	-2	-1	0	+1	+2	+2	+2
-40	+4	+4	+4	+4	+5	+6	+6	+2	-4	-12	-18	-18	-14	-8	-2	+2	+4	+4	+5	+6	+6	+6	+5	+4	+4
-50	+8	+6	+4	+2	+1	+1	+1	-2	-8	-17	-25	-27	-22	-12	-2	+5	+8	+10	+11	+13	+14	+13	+12	+10	+8
-60	+10	+7	+4	+1	0	0	0	-3	-9	-18	-26	-29	-25	-15	-4	+4	+8	+10	+11	+14	+16	+16	+15	+13	+10
April																									
+60	+7	+6	+5	+4	+3	+4	+3	-1	-8	-18	-26	-27	-21	-11	-2	+3	+6	+8	+10	+12	+13	+12	+10	+8	+7
+50	+9	+8	+7	+5	+4	+4	+4	+1	-7	-16	-23	-24	-19	-11	-3	+2	+4	+6	+7	+8	+9	+8	+8	+8	+9
+40	+5	+5	+5	+6	+6	+8	+7	+4	-4	-12	-19	-20	-16	-8	-1	+3	+5	+5	+5	+4	+4	+3	+3	+4	+5
+30	+1	+2	+2	+2	+3	+3	+2	+1	-2	-4	-5	-3	-1	+2	+2	+2	+1	0	-1	-1	-2	-2	-1	0	+1
+20	-10	-10	-10	-10	-9	-10	-9	-7	-1	+8	+18	+25	+27	+23	+16	+8	+1	-3	-5	-7	-8	-8	-9	-9	-10
+10	-23	-25	-26	-25	-23	-22	-21	-15	0	+21	+44	+58	+59	+48	+31	+15	+4	-3	-9	-13	-17	-19	-19	-20	-23
0	-26	-28	-29	-27	-25	-25	-24	-18	-1	+25	+53	+70	+71	+55	+33	+13	+1	-6	-10	-15	-19	-21	-22	-24	-26
-10	-24	-26	-26	-23	-21	-21	-21	-15	+1	+26	+52	+68	+66	+50	+27	+7	-5	-10	-13	-15	-17	-19	-20	-22	-24
-20	-12	-14	-14	-14	-12	-10	-8	-3	+5	+16	+28	+36	+36	+28	+15	+2	-6	-10	-11	-11	-10	-10	-10	-11	-12
-30	+2	+2	+2	+2	+3	+4	+4	+4	+2	0	-3	-4	-5	-4	-4	-5	-4	-3	-1	0	+2	+2	+2	+2	+2
-40	+4	+4	+3	+3	+3	+5	+7	+7	+3	-4	-11	-16	-16	-12	-8	-4	-1	+2	+4	+6	+6	+6	+5	+4	+4
-50	+6	+4	+2	+1	+1	+3	+5	+5	+1	-7	-15	-20	-19	-15	-8	-3	+1	+4	+7	+9	+10	+10	+9	+8	+6
-60	+6	+4	+1	-1	0	+1	+3	+2	-2	-10	-18	-22	-21	-16	-9	-2	+2	+6	+10	+13	+15	+14	+12	+10	+6

Table 1-L--Monthly mean solar daily variation on quiet days (S_q), geomagnetic north component (X') in gammas, 1922-33--Continued

Geographic latitude	At local mean hour 00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
													May												
+60	+8	+7	+5	+3	+1	-1	-4	-9	-17	-23	-26	-24	-18	-10	-3	+3	+8	+13	+17	+19	+18	+15	+12	+10	+8
+50	+7	+5	+4	+3	+2	+2	0	-5	-13	-20	-24	-22	-15	-6	+1	+5	+8	+10	+11	+11	+10	+9	+7	+7	+7
+40	+3	+2	+1	+1	+4	+8	+8	+3	-6	-15	-19	-17	-10	-2	+5	+8	+8	+6	+4	+2	0	+1	+2	+3	+3
+30	0	+1	+1	+2	+3	+4	+4	+2	-1	-2	-1	+2	+5	+6	+5	+2	-1	-4	-6	-6	-6	-5	-3	-1	0
+20	-8	-8	-8	-8	-8	-8	-7	-4	+2	+10	+18	+24	+25	+22	+15	+7	0	-6	-9	-11	-10	-10	-8	-8	-8
+10	-21	-22	-22	-21	-21	-20	-17	-9	+5	+22	+38	+48	+49	+42	+29	+16	+4	-5	-11	-15	-17	-17	-18	-19	-21
0	-26	-28	-27	-26	-23	-21	-17	-9	+6	+26	+46	+59	+61	+51	+34	+16	+2	-7	-13	-17	-19	-21	-22	-24	-26
-10	-28	-28	-26	-22	-18	-15	-12	-7	+4	+22	+41	+55	+58	+48	+30	+13	0	-7	-10	-12	-15	-19	-23	-26	-28
-20	-13	-12	-8	-5	-3	-3	-5	-6	-2	+7	+18	+26	+28	+22	+11	+1	-5	-7	-6	-5	-5	-7	-10	-12	-13
-30	0	+3	+5	+7	+7	+5	+3	+1	+1	+1	+2	+1	0	-2	-4	-5	-5	-5	-4	-3	-2	-2	-2	-1	0
-40	+3	+4	+5	+5	+4	+4	+3	+3	+3	+1	-3	-7	-10	-10	-8	-4	0	+2	+1	+1	0	0	+1	+2	+3
-50	+3	+3	+3	+3	+3	+4	+4	+3	+1	-3	-8	-12	-14	-12	-8	-2	+2	+4	+5	+5	+5	+5	+4	+4	+3
-60	+3	+1	+1	+2	+4	+5	+4	+3	-1	-6	-11	-15	-16	-13	-8	-3	+2	+5	+6	+7	+8	+8	+7	+5	+3
													June												
+60	+6	+4	+2	+2	+1	-1	-4	-11	-18	-25	-28	-26	-19	-10	-1	+6	+11	+15	+18	+20	+19	+17	+13	+9	+6
+50	+6	+5	+3	+2	+2	+2	-1	-6	-13	-20	-23	-21	-14	-6	+1	+6	+9	+10	+11	+12	+11	+9	+8	+7	+6
+40	+5	+2	0	-1	+1	+4	+5	+2	-5	-13	-17	-14	-7	0	+6	+7	+6	+3	+1	0	+1	+3	+5	+6	+5
+30	-1	-1	-1	0	+2	+4	+4	+2	-1	-2	-1	+2	+6	+8	+7	+3	-2	-5	-6	-6	-5	-3	-2	-1	-1
+20	-8	-8	-8	-7	-7	-6	-5	-1	+4	+10	+17	+22	+23	+20	+14	+6	-1	-7	-10	-11	-10	-10	-9	-9	-8
+10	-18	-18	-18	-17	-17	-16	-12	-4	+8	+21	+33	+40	+40	+34	+24	+13	+2	-6	-12	-14	-15	-16	-16	-17	-18
0	-22	-22	-21	-20	-19	-18	-13	-5	+9	+26	+41	+50	+50	+41	+28	+13	0	-9	-14	-17	-18	-18	-20	-21	-22
-10	-19	-20	-20	-20	-18	-15	-11	-4	+7	+22	+37	+47	+48	+39	+24	+8	-5	-12	-14	-14	-14	-14	-15	-17	-19
-20	-11	-12	-13	-12	-11	-9	-6	-1	+7	+17	+27	+33	+32	+24	+12	0	-8	-11	-11	-10	-9	-9	-9	-10	-11
-30	-2	-2	-2	-2	-2	-1	+1	+4	+8	+11	+11	+10	+5	0	-5	-7	-6	-4	-3	-2	-3	-3	-3	-2	-2
-40	-1	0	0	+1	+1	+2	+3	+6	+8	+8	+6	0	-6	-10	-10	-6	-2	0	+1	+1	0	-1	-1	-1	-1
-50	-2	-2	-1	0	+1	+2	+2	+4	+5	+5	+2	-4	-9	-10	-8	-3	+2	+4	+4	+4	+3	+2	+1	-1	-2
-60	-5	-5	-4	-1	+1	+3	+3	+4	+4	+3	0	-4	-7	-8	-6	-2	+2	+4	+5	+5	+5	+4	+2	-2	-5
													July												
+60	+5	+3	+1	+1	0	-2	-4	-9	-16	-23	-26	-25	-19	-10	0	+7	+12	+16	+18	+19	+18	+16	+12	+8	+5
+50	+7	+5	+3	+2	+2	+2	0	-5	-12	-18	-22	-21	-15	-8	-1	+4	+8	+10	+10	+10	+10	+10	+9	+8	+7
+40	+8	+5	+3	+1	+2	+4	+4	0	-6	-13	-16	-14	-8	-2	+2	+3	+2	+2	+2	+2	+3	+4	+6	+8	+8
+30	+1	+1	+1	+1	+2	+3	+2	0	-2	-2	-1	+3	+6	+7	+5	+1	-3	-5	-6	-5	-4	-3	-2	0	+1
+20	-7	-7	-8	-8	-8	-8	-6	-3	+2	+9	+18	+24	+25	+22	+14	+5	-3	-8	-10	-10	-9	-8	-7	-7	-7
+10	-18	-19	-19	-19	-19	-18	-14	-6	+6	+21	+34	+44	+45	+39	+27	+13	+1	-8	-13	-14	-15	-15	-16	-17	-18
0	-24	-24	-24	-23	-22	-20	-15	-5	+9	+26	+42	+51	+53	+46	+32	+17	+3	-8	-14	-17	-18	-20	-21	-22	-24
-10	-24	-22	-20	-18	-16	-13	-9	-2	+8	+22	+36	+46	+47	+41	+27	+12	0	-8	-11	-13	-16	-19	-22	-24	-24
-20	-11	-10	-9	-7	-5	-4	-2	0	+5	+11	+18	+22	+21	+15	+7	-1	-5	-6	-5	-4	-5	-7	-9	-11	-11
-30	-1	-1	-1	-1	0	0	+2	+4	+7	+8	+7	+3	-2	-7	-8	-6	-3	0	+1	+1	0	-1	-1	-1	-1
-40	0	+1	+1	+1	+1	+2	+4	+6	+9	+8	+4	-2	-9	-12	-11	-7	-2	+1	+2	+1	0	0	0	0	0
-50	0	-1	-1	+1	+2	+3	+5	+6	+8	+6	+2	-3	-8	-11	-10	-7	-4	-1	+1	+2	+3	+3	+3	+1	0
-60	0	-1	-1	0	+2	+4	+5	+6	+6	+4	0	-4	-7	-9	-9	-7	-5	-2	+1	+3	+4	+4	+3	+2	0
													August												
+60	+4	+3	+2	+1	+1	0	-3	-8	-15	-21	-25	-23	-16	-7	+2	+8	+11	+12	+14	+15	+15	+13	+10	+7	+4
+50	+8	+6	+4	+3	+3	+4	+2	-5	-14	-22	-26	-23	-14	-5	+2	+6	+8	+8	+9	+9	+9	+9	+9	+9	+8
+40	+10	+7	+4	+2	+3	+6	+6	+1	-9	-18	-23	-20	-12	-3	+3	+5	+4	+2	+1	+2	+4	+7	+9	+11	+10
+30	+5	+4	+3	+2	+3	+3	+2	-1	-5	-8	-7	-3	+2	+4	+4	0	-3	-5	-5	-3	-1	+1	+3	+4	+5
+20	-6	-6	-6	-6	-6	-7	-8	-6	-2	+4	+12	+18	+21	+20	+14	+6	-1	-6	-8	-7	-5	-4	-4	-6	-6
+10	-18	-19	-20	-20	-19	-17	-13	-6	+5	+19	+33	+44	+46	+41	+28	+13	+1	-7	-11	-13	-14	-16	-17	-18	-18
0	-22	-23	-24	-24	-23	-20	-15	-7	+6	+23	+41	+54	+58	+49	+33	+14	-1	-10	-14	-16	-17	-19	-20	-21	-22
-10	-21	-21	-20	-18	-17	-15	-13	-8	+3	+19	+37	+50	+52	+43	+26	+8	-5	-11	-12	-12	-12	-15	-17	-20	-21
-20	-11	-11	-10	-8	-6	-5	-4	-2	+3	+11	+20	+25	+25	+18	+7	-2	-8	-8	-6	-4	-3	-4	-7	-9	-11
-30	-3	-3	-2	-2	-1	0	+3	+6	+9	+11	+9	+5	-1	-6	-9	-8	-6	-2	0	+1	+1	0	-1	-2	-3
-40	+1	+2	+2	+3	+3	+4	+6	+9	+11	+10	+4	-4	-11	-15	-13	-9	-4	-1	0	0	0	+1	+1	+1	+1
-50	+2	+2	+3	+4	+6	+7	+9	+10	+10	+7	0	-8	-14	-17	-14	-9	-5	-2	-1	0	+1	+3	+3	+3	+2
-60	+2	+1	+1	+3	+6	+8	+10	+11	+9	+4	-2	-8	-13	-14	-13	-10	-7	-4	-2	+1	+3	+5	+5	+4	+2

Table 1-L--Monthly mean solar daily variation on quiet days (S_q), geomagnetic north component (X') in gammas, 1922-33--Concluded

Geographic latitude	At local mean hour 00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
September																									
+60	+4	+4	+4	+3	+4	+4	+3	-2	-9	-16	-21	-19	-13	-5	0	+3	+4	+5	+7	+9	+10	+9	+7	+5	+4
+50	+7	+7	+6	+5	+6	+6	+4	-2	-11	-20	-25	-23	-16	-7	0	+3	+5	+6	+8	+8	+8	+8	+7	+7	+7
+40	+10	+8	+7	+6	+7	+8	+6	-1	-10	-20	-25	-24	-16	-7	0	+4	+5	+5	+5	+5	+5	+6	+8	+9	+10
+30	+4	+4	+4	+4	+5	+4	+2	-3	-9	-13	-13	-10	-4	+1	+3	+3	+2	+1	+1	+1	+2	+3	+3	+4	+4
+20	-6	-6	-4	-3	-2	-4	-6	-8	-7	-1	+7	+14	+18	+17	+12	+6	+1	-1	-2	-3	-4	-5	-6	-6	-6
+10	-20	-21	-19	-17	-15	-15	-14	-10	+2	+18	+36	+47	+48	+38	+26	+12	+3	-5	-9	-13	-15	-17	-18	-20	-20
0	-24	-24	-22	-20	-19	-20	-20	-14	+2	+24	+46	+58	+57	+45	+27	+12	0	-7	-12	-15	-17	-18	-20	-22	-24
-10	-23	-22	-18	-14	-13	-15	-18	-15	-2	+18	+38	+50	+49	+37	+22	+8	0	-4	-7	-9	-11	-14	-17	-20	-23
-20	-10	-9	-6	-3	-3	-6	-9	-8	-2	+9	+20	+25	+23	+15	+5	-1	-4	-3	-2	-2	-4	-6	-8	-10	-10
-30	-1	0	+1	+2	+2	+2	+1	+2	+3	+5	+5	+4	+1	-2	-4	-4	-3	-2	-1	-1	-2	-2	-2	-2	-1
-40	+4	+4	+4	+5	+5	+6	+7	+7	+5	+1	-5	-10	-14	-13	-9	-4	0	+1	+1	0	0	+1	+2	+3	+4
-50	+4	+4	+4	+5	+7	+8	+9	+9	+6	0	-8	-15	-18	-16	-11	-5	0	+1	+1	+1	+2	+4	+5	+5	+4
-60	+6	+4	+2	+2	+4	+7	+9	+9	+5	-1	-8	-13	-15	-14	-10	-6	-4	-2	-1	0	+3	+5	+8	+8	+6
October																									
+60	+3	+3	+2	+2	+3	+4	+5	+3	-3	-10	-15	-16	-13	-8	-3	+1	+3	+4	+6	+7	+7	+6	+5	+4	+3
+50	+6	+5	+5	+4	+5	+6	+6	+2	-5	-13	-19	-20	-16	-10	-4	0	+2	+4	+6	+8	+8	+8	+7	+6	+6
+40	+6	+7	+7	+7	+8	+8	+7	+2	-6	-15	-22	-23	-19	-12	-5	0	+3	+5	+7	+8	+8	+7	+6	+6	+6
+30	+2	+4	+4	+4	+4	+3	+1	-1	-5	-8	-9	-8	-5	-2	0	+1	+1	+2	+3	+3	+3	+1	0	+1	+2
+20	-8	-7	-6	-5	-5	-5	-6	-5	-1	+6	+14	+21	+23	+19	+12	+4	-1	-3	-4	-6	-8	-9	-10	-10	-8
+10	-18	-18	-18	-17	-17	-17	-17	-11	+2	+21	+40	+52	+52	+40	+24	+8	-2	-8	-12	-15	-17	-18	-18	-18	-18
0	-22	-22	-21	-19	-19	-20	-21	-15	+2	+27	+50	+64	+61	+46	+26	+9	-2	-8	-14	-18	-21	-21	-21	-22	-22
-10	-23	-22	-20	-16	-14	-17	-19	-14	+2	+25	+47	+58	+54	+39	+22	+8	0	-5	-10	-16	-19	-20	-20	-21	-23
-20	-15	-14	-10	-6	-4	-6	-8	-6	+2	+16	+28	+33	+29	+19	+9	+3	0	-2	-5	-8	-11	-13	-14	-15	-15
-30	0	-1	0	+1	+3	+4	+4	+2	0	-2	-4	-6	-7	-6	-3	0	+3	+4	+4	+2	+1	0	0	0	0
-40	+3	+2	+2	+3	+6	+9	+11	+8	+1	-9	-18	-22	-19	-12	-4	+2	+4	+5	+5	+5	+5	+4	+4	+4	+3
-50	+6	+4	+2	+2	+4	+8	+11	+9	+1	-10	-21	-25	-21	-13	-5	+1	+4	+4	+4	+5	+6	+7	+8	+7	+6
-60	+11	+6	+2	0	0	+3	+6	+6	+1	-8	-16	-20	-17	-11	-5	-1	-1	-2	-1	+2	+7	+11	+14	+14	+11
November																									
+60	0	0	0	+1	+2	+4	+5	+4	+1	-3	-7	-9	-8	-5	-2	0	+1	+2	+3	+3	+3	+2	+1	0	0
+50	+3	+3	+2	+3	+4	+6	+7	+4	-1	-7	-12	-14	-12	-8	-4	-1	+2	+3	+4	+4	+4	+4	+3	+3	+3
+40	+3	+3	+4	+5	+6	+8	+8	+5	-1	-9	-16	-20	-18	-13	-6	+1	+5	+6	+6	+6	+5	+4	+3	+3	+3
+30	+2	+2	+2	+3	+3	+4	+5	+4	0	-4	-8	-9	-8	-5	-2	0	+2	+2	+3	+2	+1	0	0	+1	+2
+20	-8	-8	-8	-7	-6	-5	-3	0	+5	+11	+17	+20	+19	+14	+8	+2	-1	-3	-4	-6	-8	-9	-10	-9	-8
+10	-18	-18	-18	-17	-17	-18	-16	-9	+5	+24	+40	+49	+46	+34	+19	+6	-2	-7	-9	-12	-14	-15	-16	-18	-18
0	-21	-20	-20	-20	-22	-25	-24	-14	+7	+32	+53	+62	+56	+40	+22	+6	-4	-9	-13	-15	-17	-18	-18	-20	-21
-10	-17	-16	-15	-15	-18	-22	-21	-10	+12	+36	+53	+57	+48	+32	+16	+4	-5	-12	-17	-20	-20	-18	-16	-16	-17
-20	-12	-11	-9	-8	-9	-10	-9	-1	+12	+25	+33	+33	+26	+17	+10	+3	-2	-9	-14	-16	-15	-12	-11	-11	-12
-30	0	0	0	+1	+2	+3	+3	+3	+1	-1	-2	-2	-2	-1	-1	0	0	0	0	0	-1	-1	-1	0	0
-40	+5	+4	+3	+3	+5	+8	+8	+3	-6	-16	-22	-22	-16	-7	0	+5	+7	+8	+8	+7	+5	+4	+4	+4	+5
-50	+7	+5	+3	+2	+3	+5	+4	-2	-11	-22	-28	-26	-19	-8	+1	+7	+10	+11	+12	+11	+10	+9	+9	+8	+7
-60	+11	+8	+4	+1	-1	-3	-5	-8	-13	-17	-19	-18	-13	-8	-3	+1	+3	+6	+8	+11	+13	+14	+14	+13	+11
December																									
+60	-2	-2	-2	-1	0	+2	+3	+3	+1	-1	-4	-4	-3	-1	0	+1	+2	+2	+3	+3	+2	+1	0	-2	-2
+50	+1	+1	+1	+2	+3	+4	+5	+4	0	-4	-8	-9	-8	-6	-3	-1	+1	+2	+3	+4	+3	+2	+1	+1	+1
+40	+3	+3	+3	+3	+4	+6	+7	+6	+3	-3	-11	-16	-18	-14	-7	0	+5	+6	+5	+3	+3	+3	+3	+3	+3
+30	-2	0	+2	+3	+3	+3	+4	+5	+6	+3	-1	-6	-9	-8	-4	0	+2	+2	+2	0	0	-1	-2	-2	-2
+20	-7	-6	-5	-4	-3	-3	-3	0	+4	+10	+14	+15	+14	+10	+6	+2	-1	-3	-5	-6	-7	-7	-7	-7	-7
+10	-15	-17	-18	-18	-17	-16	-13	-7	+5	+22	+39	+48	+45	+33	+18	+5	-3	-7	-10	-13	-15	-16	-15	-14	-15
0	-15	-19	-22	-23	-23	-23	-21	-12	+7	+33	+57	+68	+63	+43	+19	-1	-12	-16	-18	-19	-19	-18	-15	-14	-15
-10	-15	-17	-20	-21	-22	-22	-18	-8	+12	+37	+59	+68	+60	+39	+14	-6	-16	-20	-20	-20	-20	-18	-15	-14	-15
-20	-12	-13	-13	-12	-12	-10	-7	0	+12	+26	+38	+43	+37	+23	+8	-3	-10	-13	-14	-14	-15	-14	-13	-12	-12
-30	-1	-1	-2	-2	-1	0	0	0	+1	+1	+2	+2	+3	+3	+2	+1	0	-1	-2	-2	-2	-2	-1	0	-1
-40	+4	+3	+2	+2	+4	+5	+4	-1	-9	-17	-23	-22	-15	-6	+4	+10	+12	+10	+8	+6	+5	+4	+4	+4	+4
-50	+5	+2	0	0	+1	+2	+1	-5	-15	-25	-31	-30	-20	-6	+6	+15	+18	+17	+15	+12	+11	+10	+8	+7	+5
-60	+10	+4	-1	-4	-6	-6	-6	-9	-15	-21	-26	-24	-16	-5	+6	+12	+14	+13	+12	+12	+13	+14	+15	+13	+10

Table 1-M--Monthly mean solar daily variation on quiet days (S_q), geomagnetic east component (Y') in gammas, 1922-33

Geographic latitude	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
January																									
+60	+4	+2	+1	+1	+2	+2	+3	+4	+4	+4	+1	-4	-8	-10	-9	-7	-4	-2	-1	0	+2	+4	+5	+5	+4
+50	+4	+2	+1	+1	+1	+2	+3	+5	+7	+8	+4	-2	-9	-13	-13	-9	-5	-2	-1	0	+2	+4	+6	+5	+4
+40	-1	-2	-1	0	0	-1	0	+6	+13	+18	+15	+6	-7	-16	-18	-13	-7	-2	0	+1	+2	+3	+3	+2	-1
+30	-3	-4	-2	-1	-2	-3	-2	+4	+14	+22	+21	+10	-5	-17	-20	-14	-5	0	+2	+1	+1	+2	+1	0	-3
+20	-1	-2	-1	-1	-2	-6	-7	-3	+6	+15	+17	+10	-2	-11	-13	-7	0	+4	+3	+1	0	0	+1	0	-1
+10	-7	-8	-6	-4	-4	-6	-8	-6	+1	+11	+17	+16	+10	+4	+1	+3	+5	+5	+1	-3	-5	-5	-4	-6	-7
0	-7	-7	-5	-2	-1	-4	-8	-10	-6	+3	+12	+16	+15	+11	+7	+5	+5	+3	0	-3	-5	-5	-5	-6	-7
-10	-10	-8	-4	0	+1	-2	-9	-13	-10	-2	+9	+18	+20	+18	+13	+9	+6	+2	-1	-4	-7	-8	-9	-10	-10
-20	-3	-3	-1	+1	+1	-4	-12	-20	-22	-16	-5	+8	+16	+19	+18	+14	+10	+6	+2	0	-2	-2	-2	-2	-3
-30	+3	+1	0	0	-2	-6	-15	-25	-31	-29	-20	-5	+9	+19	+23	+21	+17	+12	+7	+4	+4	+4	+5	+5	+3
-40	+1	-2	-4	-5	-6	-9	-17	-26	-32	-31	-21	-5	+12	+23	+28	+26	+21	+15	+10	+7	+5	+4	+4	+3	+1
-50	-4	-6	-7	-7	-8	-10	-15	-22	-27	-26	-17	-3	+11	+22	+25	+24	+19	+16	+13	+11	+8	+5	+2	-1	-4
-60	-6	-7	-7	-7	-9	-12	-15	-19	-22	-20	-14	-4	+8	+16	+20	+20	+18	+16	+15	+14	+11	+6	+1	-4	-6
February																									
+60	+4	+3	+3	+3	+4	+5	+6	+7	+8	+6	+2	-5	-11	-14	-14	-10	-5	-2	-1	0	+1	+3	+4	+4	+4
+50	+4	+2	+1	+2	+2	+3	+5	+8	+11	+11	+6	-2	-11	-15	-15	-11	-6	-4	-3	-2	+1	+4	+5	+5	+4
+40	+1	0	-1	0	0	+1	+4	+9	+14	+16	+12	+3	-7	-14	-15	-12	-8	-5	-4	-3	0	+2	+4	+3	+1
+30	-2	-2	-1	-1	-1	-1	+1	+7	+14	+18	+16	+7	-5	-14	-16	-13	-7	-3	-1	0	0	+1	+1	0	-2
+20	-2	-2	-1	0	-1	-3	-3	0	+6	+11	+12	+7	-2	-9	-10	-7	-2	+1	+2	+1	+1	+1	+1	0	-2
+10	-1	-1	0	+1	0	-4	-8	-9	-6	0	+4	+4	+2	-1	-1	+1	+4	+4	+3	+1	+1	+2	+2	+1	-1
0	-6	-4	-1	+1	+1	-3	-8	-11	-9	-3	+3	+8	+9	+9	+9	+9	+8	+6	+2	-1	-3	-4	-4	-5	-6
-10	-13	-11	-5	0	+2	-1	-7	-12	-11	-4	+6	+14	+18	+19	+18	+16	+12	+7	0	-5	-8	-10	-12	-13	-13
-20	-9	-8	-5	-1	0	-3	-9	-15	-17	-14	-5	+6	+15	+21	+24	+22	+17	+10	+3	-3	-6	-7	-8	-8	-9
-30	+2	0	-1	-1	-2	-6	-13	-22	-29	-31	-24	-11	+4	+18	+25	+26	+22	+15	+9	+5	+3	+4	+4	+4	+2
-40	-1	-3	-4	-4	-4	-6	-12	-22	-31	-33	-25	-9	+9	+23	+29	+27	+21	+15	+11	+8	+5	+4	+2	+1	-1
-50	-6	-8	-7	-6	-4	-5	-11	-20	-29	-30	-22	-5	+13	+25	+29	+26	+20	+15	+12	+9	+6	+3	-1	-4	-6
-60	-7	-8	-9	-8	-7	-8	-11	-16	-21	-22	-16	-5	+8	+17	+21	+21	+19	+18	+16	+14	+9	+3	-2	-5	-7
March																									
+60	+6	+5	+4	+4	+4	+5	+8	+11	+14	+12	+4	-7	-18	-24	-22	-16	-7	-2	+1	+1	+2	+4	+6	+6	+6
+50	+5	+4	+4	+3	+3	+4	+7	+13	+17	+17	+10	-4	-17	-24	-24	-17	-9	-3	-1	0	+1	+3	+4	+5	+5
+40	+3	+2	+2	+2	+2	+3	+7	+14	+20	+21	+14	0	-15	-24	-24	-18	-10	-5	-3	-2	0	+2	+4	+4	+3
+30	+2	+2	+2	+1	+1	+2	+7	+14	+21	+22	+15	+1	-14	-22	-23	-17	-11	-6	-4	-2	0	+2	+3	+3	+2
+20	+1	+1	+1	+1	+1	0	+2	+8	+14	+16	+13	+3	-8	-15	-15	-11	-7	-4	-3	-2	-1	+1	+2	+2	+1
+10	-2	-2	-1	0	-1	-4	-6	-4	0	+6	+8	+6	+2	-2	-2	0	+2	+2	+1	-1	-1	-1	0	-1	-2
0	-9	-8	-5	-2	-1	-2	-6	-7	-4	+1	+7	+11	+11	+10	+9	+8	+6	+3	0	-3	-4	-4	-5	-7	-9
-10	-12	-10	-6	-2	0	-1	-5	-8	-9	-5	+3	+10	+16	+19	+18	+14	+9	+4	-1	-4	-6	-7	-8	-10	-12
-20	-4	-4	-3	-2	-2	-3	-7	-13	-18	-19	-13	-2	+10	+19	+22	+19	+13	+8	+4	+2	+1	0	-2	-4	-4
-30	+1	0	-1	-2	-2	-4	-8	-16	-25	-29	-25	-12	+4	+18	+24	+22	+17	+12	+8	+6	+5	+4	+3	+2	+1
-40	-1	-2	-3	-4	-3	-4	-8	-16	-26	-31	-26	-11	+8	+23	+28	+26	+19	+12	+8	+6	+4	+2	0	-1	-1
-50	-5	-5	-5	-5	-4	-4	-8	-16	-24	-28	-22	-8	+10	+23	+27	+24	+17	+12	+10	+8	+5	+2	-2	-4	-5
-60	-7	-7	-6	-5	-4	-5	-8	-13	-19	-21	-17	-6	+6	+16	+20	+19	+16	+13	+12	+11	+8	+4	-1	-5	-7
April																									
+60	+4	+5	+6	+7	+9	+11	+14	+17	+17	+12	+2	-11	-22	-27	-25	-18	-10	-4	-1	+1	+2	+3	+4	+4	+4
+50	+3	+4	+5	+5	+6	+9	+14	+20	+23	+19	+7	-8	-22	-28	-26	-19	-12	-6	-3	0	+1	+2	+3	+3	+3
+40	+1	+2	+4	+4	+4	+7	+14	+22	+27	+23	+11	-5	-19	-25	-24	-18	-12	-8	-5	-3	-1	0	0	0	+1
+30	-2	0	+1	+2	+2	+6	+13	+23	+28	+26	+14	-3	-16	-22	-21	-15	-10	-7	-5	-4	-3	-2	-2	-2	-2
+20	0	+1	+1	0	0	+2	+9	+18	+24	+22	+12	-4	-16	-21	-18	-10	-4	-2	-2	-2	-3	-3	-2	-2	0
+10	0	0	+1	+2	+2	+2	+3	+6	+8	+9	+4	-4	-11	-14	-11	-5	+1	+4	+4	+2	0	0	0	0	0
0	-6	-5	-2	+2	+5	+4	+1	-2	-2	0	+1	0	-2	-2	0	+3	+5	+5	+3	+1	0	-1	-2	-4	-6
-10	-16	-13	-7	0	+4	+4	+1	-2	-4	-1	+4	+8	+12	+14	+14	+12	+9	+5	+1	-3	-6	-9	-12	-15	-16
-20	-11	-8	-4	0	+2	+2	-2	-7	-11	-11	-7	0	+10	+18	+21	+19	+13	+7	+2	-1	-4	-6	-9	-11	-11
-30	0	0	-1	-2	-2	-2	-4	-10	-17	-22	-22	-13	+1	+14	+22	+21	+16	+9	+5	+2	+1	+1	0	0	0
-40	0	0	-1	-2	-3	-2	-3	-8	-16	-23	-22	-13	+3	+17	+24	+22	+15	+8	+4	+2	+1	0	-1	-1	0
-50	-4	-2	-1	-1	-2	-2	-4	-8	-14	-19	-18	-9	+4	+16	+21	+19	+13	+8	+6	+5	+3	-1	-5	-6	-4
-60	-4	0	+2	+1	0	-2	-3	-6	-10	-14	-14	-8	+1	+10	+14	+13	+10	+8	+7	+6	+3	-2	-6	-6	-4

Table 1-M--Monthly mean solar daily variation on quiet days (S_q), geomagnetic east component (Y') in gammas, 1922-33--Continued

Geographic latitude	At local mean hour																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
													May												
+60	+1	+2	+5	+8	+12	+17	+21	+23	+20	+11	-1	-14	-24	-28	-25	-19	-11	-5	-1	+1	+2	+2	+1	+1	+1
+50	+2	+3	+4	+6	+8	+13	+19	+24	+23	+16	+2	-13	-24	-28	-26	-20	-13	-6	-2	+1	+2	+2	+2	+2	+2
+40	+2	+3	+3	+3	+5	+10	+18	+26	+27	+19	+5	-11	-23	-28	-25	-19	-12	-6	-2	+1	+2	+2	+1	+1	+2
+30	0	+2	+2	+1	+3	+8	+18	+27	+29	+21	+6	-11	-22	-25	-21	-15	-10	-6	-3	-1	0	0	-1	-1	0
+20	-1	+1	+1	0	+1	+6	+15	+23	+25	+19	+6	-9	-19	-21	-17	-11	-5	-2	-1	-1	-1	-2	-3	-2	-1
+10	-2	-2	-2	-1	+1	+6	+10	+14	+14	+10	+2	-6	-13	-14	-10	-4	+1	+4	+2	0	-2	-4	-3	-2	-2
0	-4	-4	-4	-2	+2	+6	+8	+9	+6	+3	-1	-4	-5	-4	0	+3	+5	+4	+1	-2	-4	-5	-4	-4	-4
-10	-9	-7	-4	-1	+3	+6	+7	+6	+2	-1	-3	-2	+2	+7	+11	+11	+7	+3	-1	-4	-6	-8	-9	-10	-9
-20	-8	-5	-3	-1	+1	+3	+4	+2	-1	-5	-7	-4	+3	+11	+15	+15	+11	+5	0	-3	-5	-7	-9	-9	-8
-30	-1	0	0	0	0	0	0	-2	-6	-12	-15	-12	-4	+6	+13	+15	+12	+7	+3	+1	0	-1	-2	-2	-1
-40	-3	-1	-1	-1	-1	-1	-1	-3	-8	-13	-15	-11	-2	+9	+16	+16	+12	+7	+3	+2	+1	-1	-2	-3	-3
-50	-7	-4	-1	0	-1	-1	-1	-3	-6	-9	-10	-6	+2	+11	+15	+15	+11	+7	+4	+2	0	-4	-7	-8	-7
-60	-8	-5	-2	-1	-1	-2	-2	-2	-3	-5	-6	-4	+1	+8	+12	+12	+10	+8	+6	+5	+1	-4	-8	-10	-8
													June												
+60	0	+1	+5	+9	+13	+19	+22	+24	+22	+14	+3	-10	-21	-25	-25	-19	-11	-6	-2	-2	-3	-2	-3	-2	0
+50	+1	+2	+3	+5	+10	+16	+23	+27	+26	+18	+5	-10	-22	-27	-26	-20	-13	-8	-4	-2	-1	-1	0	0	+1
+40	+1	+1	+1	+1	+4	+12	+22	+30	+31	+23	+8	-10	-22	-28	-26	-20	-13	-7	-3	-1	-1	-1	-1	0	+1
+30	+2	+2	+1	0	+2	+9	+20	+29	+31	+23	+8	-10	-22	-27	-24	-18	-11	-6	-3	-2	-2	-2	-2	0	+2
+20	+1	+1	0	-1	+1	+8	+18	+26	+28	+21	+7	-8	-18	-22	-19	-13	-8	-5	-3	-3	-3	-3	-3	-1	+1
+10	-2	-1	-2	-2	0	+6	+15	+22	+23	+16	+5	-6	-13	-14	-11	-7	-4	-3	-4	-4	-5	-5	-4	-3	-2
0	-5	-5	-4	-3	0	+6	+12	+17	+17	+11	+3	-4	-6	-4	-1	+1	0	-3	-5	-5	-5	-5	-6	-6	-5
-10	-9	-7	-4	-2	+1	+5	+9	+12	+11	+6	0	-2	0	+6	+9	+8	+3	-3	-6	-6	-6	-7	-8	-10	-9
-20	-8	-5	-4	-2	0	+3	+6	+8	+7	+1	-4	-4	0	+7	+12	+12	+7	0	-4	-6	-6	-6	-8	-8	-8
-30	-4	-2	-1	-2	-1	0	+3	+4	+2	-3	-8	-8	-2	+6	+12	+13	+10	+4	0	-3	-4	-5	-6	-6	-4
-40	-3	-1	0	0	0	+1	+2	+1	-2	-7	-10	-9	-3	+6	+12	+13	+9	+4	+1	-1	-2	-3	-4	-4	-3
-50	-4	-1	+1	+2	+2	+1	+1	0	-4	-8	-10	-8	-2	+5	+10	+10	+7	+4	+2	+1	+1	-1	-4	-5	-4
-60	-6	-4	0	+2	+3	+3	+2	0	-3	-6	-8	-7	-3	+3	+7	+7	+5	+4	+4	+4	+3	0	-4	-6	-6
													July												
+60	+1	+3	+6	+10	+14	+19	+22	+22	+19	+11	0	-12	-22	-27	-26	-19	-11	-5	-1	0	-1	-1	-1	0	+1
+50	+1	+2	+4	+6	+10	+16	+21	+25	+24	+17	+5	-10	-22	-28	-27	-21	-13	-6	-1	0	0	-1	-1	0	+1
+40	0	+1	+1	+2	+5	+12	+21	+29	+31	+23	+9	-8	-22	-28	-26	-20	-12	-6	-2	-1	-2	-2	-3	-2	0
+30	0	+1	0	0	+2	+10	+21	+30	+32	+24	+9	-9	-22	-27	-25	-18	-11	-5	-1	-1	-2	-3	-3	-2	0
+20	0	+2	+2	+1	+2	+7	+16	+24	+26	+19	+6	-8	-18	-21	-18	-13	-7	-4	-2	-1	-3	-4	-4	-2	0
+10	0	+2	+2	+2	+2	+6	+12	+18	+18	+12	+2	-8	-14	-14	-10	-7	-4	-3	-2	-2	-2	-3	-4	-3	0
0	-1	+1	+2	+2	+2	+5	+9	+13	+11	+5	-3	-8	-9	-6	-3	-1	-2	-3	-3	-2	-2	-2	-3	-2	-1
-10	-2	0	+2	+2	+3	+5	+7	+8	+5	-2	-7	-9	-6	0	+4	+4	+1	-2	-3	-2	-1	-2	-3	-3	-2
-20	-2	0	+2	+2	+2	+4	+5	+5	0	-6	-12	-12	-6	+2	+8	+9	+6	+2	0	-1	0	-1	-3	-3	-2
-30	-3	-1	0	0	0	+1	+3	+4	0	-6	-12	-12	-5	+5	+13	+15	+11	+5	0	-2	-2	-4	-5	-5	-3
-40	-6	-3	-1	-1	0	0	+2	+1	-2	-8	-12	-10	-3	+8	+15	+17	+12	+6	+2	0	-1	-3	-5	-6	-6
-50	-8	-5	-1	0	0	0	0	0	-3	-7	-10	-8	-1	+8	+15	+15	+11	+6	+3	+2	0	-3	-7	-9	-8
-60	-5	-2	-1	-2	-5	-7	-6	-4	-3	-2	-2	0	+4	+10	+12	+9	+5	+1	+1	+3	+3	+1	-3	-5	-5
													August												
+60	+4	+5	+6	+8	+12	+16	+19	+20	+17	+9	-2	-15	-26	-30	-27	-19	-9	-2	+2	+2	+2	+2	+2	+3	+4
+50	+5	+6	+6	+6	+9	+14	+20	+24	+23	+15	0	-16	-29	-33	-29	-20	-10	-3	0	+1	+1	+2	+3	+4	+5
+40	+2	+3	+3	+3	+5	+12	+22	+31	+32	+23	+5	-14	-28	-32	-27	-18	-10	-4	-2	-1	-1	-1	-1	0	+2
+30	0	+1	+1	+1	+4	+11	+22	+32	+34	+24	+6	-14	-27	-29	-24	-15	-8	-4	-3	-3	-3	-3	-2	-1	0
+20	+2	+3	+3	+2	+3	+9	+18	+26	+27	+18	+2	-15	-25	-26	-20	-11	-5	-2	-1	-2	-2	-2	-2	0	+2
+10	+2	+3	+2	+1	+1	+6	+14	+19	+19	+10	-3	-15	-20	-19	-12	-5	0	+2	+1	0	-2	-3	-2	0	+2
0	-5	-4	-3	-2	+1	+6	+13	+17	+15	+7	-2	-8	-9	-5	0	+3	+4	+2	0	-3	-5	-7	-7	-6	-5
-10	-9	-7	-5	-2	+2	+7	+11	+13	+9	+2	-4	-6	-2	+4	+9	+9	+6	+2	-2	-4	-6	-8	-9	-10	-9
-20	-10	-7	-5	-2	+1	+5	+8	+9	+5	-1	-6	-5	+1	+8	+13	+13	+9	+3	-1	-4	-6	-8	-10	-10	-10
-30	-8	-5	-3	-1	0	+2	+4	+4	0	-5	-9	-8	-1	+8	+15	+16	+13	+7	+2	-3	-5	-8	-9	-9	-8
-40	-4	-3	-1	0	+1	+2	+2	0	-4	-11	-14	-12	-4	+7	+15	+17	+13	+7	+3	0	-2	-3	-5	-5	-4
-50	-3	-2	-1	0	0	0	+1	-2	-7	-13	-17	-14	-5	+7	+15	+17	+14	+8	+4	+2	+1	0	-2	-4	-3
-60	0	0	-1	-3	-6	-8	-7	-6	-6	-8	-9	-6	+1	+8	+13	+12	+7	+2	+1	+2	+4	+4	+3	+1	0

Table 1-M--Monthly mean solar daily variation on quiet days (S_q), geomagnetic east component (Y') in gammas, 1922-33--Concluded

Geographic latitude	At local mean hour																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
September																									
+60	+5	+6	+8	+9	+10	+12	+14	+15	+14	+8	-3	-16	-25	-27	-22	-14	-7	-3	-1	0	+2	+4	+5	+5	+5
+50	+5	+6	+8	+8	+9	+11	+15	+20	+20	+12	-1	-17	-27	-30	-24	-16	-8	-4	-1	0	+2	+3	+4	+4	+5
+40	0	+1	+2	+4	+5	+10	+18	+26	+28	+21	+5	-12	-24	-26	-20	-12	-6	-4	-4	-4	-3	-2	-1	-1	0
+30	-1	+1	+2	+2	+3	+8	+17	+26	+29	+22	+6	-12	-25	-27	-20	-11	-4	-2	-2	-3	-2	-2	-2	-2	-1
+20	+2	+3	+3	+1	+1	+5	+13	+21	+24	+17	+1	-16	-26	-25	-17	-8	-1	+1	+1	0	0	0	0	0	+2
+10	0	+1	+2	+1	+1	+4	+10	+16	+17	+10	-2	-14	-20	-17	-10	-2	+3	+3	+2	0	-1	-1	-2	-1	0
0	-8	-6	-4	-2	0	+5	+10	+14	+13	+7	0	-6	-6	-2	+3	+6	+6	+4	0	-2	-5	-8	-9	-10	-8
-10	-13	-11	-7	-3	+2	+7	+10	+10	+6	0	-4	-2	+4	+11	+15	+13	+8	+3	-1	-4	-6	-10	-13	-14	-13
-20	-8	-6	-4	-2	+1	+5	+6	+3	-3	-10	-14	-9	+1	+12	+18	+17	+12	+6	+2	-1	-3	-6	-8	-9	-8
-30	+2	+2	+1	+1	+1	+2	+1	-4	-13	-22	-25	-20	-8	+6	+16	+18	+15	+10	+6	+4	+3	+2	+1	+2	+2
-40	-1	-1	0	0	+1	+1	-1	-7	-16	-24	-25	-18	-4	+11	+20	+21	+17	+12	+7	+4	+2	+1	-1	-1	-1
-50	-6	-5	-2	0	+2	+2	-2	-9	-16	-22	-21	-12	0	+13	+21	+21	+17	+12	+8	+5	+3	0	-4	-6	-6
-60	-8	-7	-4	0	+2	0	-4	-10	-16	-18	-16	-9	0	+10	+16	+18	+18	+16	+12	+9	+4	0	-5	-8	-8
October																									
+60	+6	+4	+4	+4	+4	+5	+7	+10	+11	+8	0	-9	-17	-20	-17	-11	-6	-4	-2	0	+3	+6	+7	+7	+6
+50	+5	+4	+4	+3	+2	+4	+8	+13	+16	+13	+3	-10	-20	-23	-19	-12	-7	-4	-2	0	+3	+6	+6	+6	+5
+40	-1	0	+1	0	+1	+3	+10	+18	+23	+20	+9	-6	-17	-20	-16	-10	-6	-5	-4	-2	0	+2	+1	0	-1
+30	-2	-1	0	0	-1	+2	+9	+18	+24	+20	+9	-6	-17	-19	-14	-8	-5	-4	-4	-2	0	+1	0	-2	-2
+20	-1	0	0	0	-1	0	+5	+12	+16	+14	+5	-7	-15	-16	-10	-4	0	0	0	0	+1	+1	+1	0	-1
+10	-3	-3	-2	-2	-2	-1	+1	+4	+8	+7	+3	-4	-8	-7	-3	+3	+6	+5	+2	0	-1	0	-1	-2	-3
0	-11	-9	-6	-3	-1	+1	+2	+3	+4	+5	+4	+4	+4	+6	+8	+10	+9	+6	+1	-3	-6	-8	-9	-10	-11
-10	-14	-10	-5	0	+3	+3	+1	-2	-4	-4	-1	+4	+10	+14	+15	+14	+10	+6	+2	-2	-5	-9	-12	-14	-14
-20	-8	-5	-1	+3	+4	+2	-4	-11	-17	-19	-15	-5	+7	+17	+21	+18	+13	+8	+5	+3	+1	-3	-7	-9	-8
-30	+2	+2	+2	+1	+1	-1	-6	-16	-27	-34	-31	-18	0	+18	+27	+27	+20	+12	+7	+4	+3	+3	+2	+2	+2
-40	0	0	0	0	-1	-2	-8	-17	-28	-35	-31	-16	+5	+22	+30	+29	+21	+13	+8	+5	+3	+1	0	0	0
-50	-6	-5	-3	-1	0	-2	-8	-18	-26	-29	-23	-9	+8	+22	+28	+26	+20	+14	+11	+8	+4	0	-4	-6	-6
-60	-7	-6	-4	-3	-3	-5	-10	-16	-21	-22	-17	-6	+5	+15	+20	+21	+20	+18	+15	+11	+6	0	-5	-7	-7
November																									
+60	+4	+3	+3	+3	+3	+3	+4	+5	+5	+3	-2	-8	-12	-12	-10	-7	-4	-2	0	+2	+4	+5	+5	+4	+4
+50	+2	+2	+2	+2	+2	+2	+4	+7	+9	+7	+1	-8	-14	-16	-13	-8	-4	-2	0	+2	+5	+6	+6	+4	+2
+40	-2	-2	-1	0	+1	+2	+5	+10	+15	+15	+9	-2	-13	-17	-15	-9	-3	0	0	+1	+2	+3	+2	0	-2
+30	-3	-3	-2	-1	-1	0	+4	+10	+17	+18	+11	-1	-13	-18	-16	-10	-3	0	+1	+2	+2	+2	+1	-1	-3
+20	-3	-3	-2	-2	-2	-2	+1	+5	+10	+11	+8	0	-8	-12	-10	-6	-1	+2	+4	+4	+4	+3	+1	-2	-3
+10	-5	-5	-4	-3	-3	-4	-4	-2	+2	+4	+5	+2	0	-2	-1	+1	+4	+5	+5	+4	+3	+2	-1	-4	-5
0	-9	-6	-3	0	0	-2	-4	-4	-2	+1	+5	+8	+8	+8	+6	+6	+5	+4	+2	0	-2	-5	-7	-9	-9
-10	-11	-7	-1	+3	+4	0	-5	-9	-9	-5	+3	+9	+13	+15	+14	+11	+7	+4	+2	-1	-4	-8	-11	-12	-11
-20	-8	-3	+2	+5	+4	-2	-11	-18	-22	-19	-10	+2	+12	+18	+19	+16	+12	+9	+7	+5	+2	-3	-7	-9	-8
-30	+1	+1	+1	+1	0	-5	-13	-23	-31	-34	-28	-13	+5	+20	+28	+27	+20	+13	+8	+6	+5	+5	+3	+2	+1
-40	-2	-2	-2	-1	-2	-6	-14	-26	-35	-37	-28	-10	+11	+27	+33	+31	+24	+17	+11	+7	+4	+2	0	-2	-2
-50	-6	-6	-5	-4	-4	-8	-16	-27	-34	-34	-22	-4	+14	+28	+34	+33	+27	+20	+14	+8	+2	-1	-4	-5	-6
-60	-7	-7	-6	-6	-7	-11	-18	-25	-29	-27	-18	-4	+11	+22	+28	+29	+27	+23	+18	+11	+5	0	-4	-6	-7
December																									
+60	+5	+3	+2	+1	+1	+2	+2	+3	+3	+2	0	-4	-7	-9	-8	-6	-4	-2	-1	0	+2	+4	+6	+6	+5
+50	+5	+3	+1	0	-1	0	+2	+4	+6	+6	+2	-3	-8	-10	-10	-7	-5	-4	-2	-1	+2	+5	+7	+6	+5
+40	0	0	0	+1	+1	0	+1	+3	+8	+11	+9	+3	-5	-11	-12	-10	-5	-2	0	+1	+2	+3	+3	+2	0
+30	0	-1	0	+1	+1	0	0	+3	+8	+12	+11	+5	-5	-12	-13	-9	-4	-1	0	0	0	+1	+2	+1	0
+20	-1	-2	-1	0	0	-2	-2	0	+4	+8	+9	+4	-3	-9	-10	-6	-1	+2	+3	+2	+2	+2	+1	0	-1
+10	-5	-5	-4	-2	-2	-4	-5	-5	-1	+4	+6	+5	+1	-3	-5	-3	+1	+4	+6	+7	+6	+4	+1	-2	-5
0	-10	-9	-5	0	+1	-1	-5	-7	-4	+2	+8	+11	+9	+4	0	-1	+1	+4	+5	+5	+3	0	-4	-8	-10
-10	-15	-11	-4	+2	+5	+2	-3	-8	-7	-1	+7	+13	+14	+11	+7	+4	+3	+4	+5	+3	0	-5	-11	-14	-15
-20	-8	-6	-2	+1	+2	-2	-9	-15	-18	-15	-8	+2	+10	+16	+17	+15	+12	+9	+6	+3	+1	-2	-5	-7	-8
-30	+3	+2	+1	0	-2	-6	-15	-25	-32	-32	-24	-10	+6	+18	+24	+23	+20	+14	+10	+7	+5	+4	+4	+4	+3
-40	+1	0	-1	-2	-4	-9	-17	-28	-36	-35	-25	-8	+11	+24	+30	+29	+24	+17	+11	+7	+4	+2	+2	+2	+1
-50	-2	-3	-4	-5	-7	-11	-19	-27	-33	-31	-21	-4	+14	+27	+32	+30	+25	+18	+12	+7	+4	+1	0	-1	-2
-60	-4	-5	-8	-10	-13	-16	-20	-24	-26	-23	-15	-2	+11	+21	+26	+26	+23	+20	+17	+12	+8	+3	0	-2	-4

Table 1-N--Monthly mean solar daily variation on quiet days (S_q), geomagnetic vertical component (Z) in gammas, 1922-33

Geographic latitude	At local mean hour																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
January																									
+60	-2	-2	-3	-3	-3	-2	-1	-1	-1	-1	-1	0	0	+1	+2	+3	+3	+2	+2	+2	+2	+1	+1	0	-2
+50	0	-1	-1	-2	-2	-1	-1	0	0	-1	-2	-2	-2	0	+1	+2	+2	+2	+1	+2	+2	+2	+1	0	0
+40	0	0	0	+1	+1	+1	+1	+1	+1	-1	-3	-4	-4	-3	0	+1	+1	+1	0	+1	+1	+2	+1	+1	0
+30	+2	+3	+3	+3	+2	+2	+3	+4	+5	+3	-2	-7	-10	-9	-6	-3	0	+1	+1	+1	+2	+2	+2	+2	+2
+20	+6	+6	+6	+4	+2	+1	+1	+4	+4	+1	-5	-12	-16	-15	-10	-4	0	+2	+3	+4	+4	+4	+5	+5	+6
+10	+6	+5	+4	+3	+1	0	-1	-1	-1	-4	-8	-13	-14	-12	-7	-1	+3	+4	+5	+5	+6	+7	+7	+6	+6
0	+1	0	0	+1	+1	+1	0	0	0	-1	-3	-5	-7	-6	-4	-1	+2	+3	+3	+3	+3	+3	+3	+2	+1
-10	-1	-1	0	+1	+1	+1	+1	+1	+2	+5	+7	+7	+5	+2	-2	-3	-3	-4	-4	-4	-4	-3	-2	-2	-1
-20	-4	-3	-2	-2	-2	-2	-4	-4	-1	+4	+11	+15	+16	+13	+7	+1	-3	-6	-7	-7	-6	-6	-5	-4	-4
-30	-6	-5	-3	-2	-2	-5	-9	-12	-10	-3	+7	+17	+23	+23	+17	+9	+1	-4	-7	-7	-6	-5	-6	-6	-6
-40	-2	-2	-1	-1	0	-2	-3	-6	-6	-4	+2	+7	+11	+11	+10	+5	+2	-2	-3	-5	-4	-4	-2	-2	-2
-50	-1	0	0	0	0	0	0	-1	-1	0	0	+1	+2	+2	+1	+1	0	-1	-1	-1	-1	-1	-1	-1	-1
-60	0	+1	+1	+2	+2	+2	+2	+2	+2	+2	+1	+1	0	-1	-1	-2	-2	-3	-3	-2	-2	-2	-1	0	0
February																									
+60	-2	-3	-4	-3	-3	-3	-2	-1	0	-1	-2	-2	-2	0	+2	+4	+4	+4	+4	+3	+3	+3	+1	-1	-2
+50	0	0	0	0	-1	-1	0	0	+1	0	-2	-4	-4	-3	-1	+1	+2	+2	+2	+2	+2	+2	+2	0	0
+40	0	+1	+1	+1	+1	+1	+2	+3	+2	0	-3	-5	-5	-4	-2	0	+1	+1	+1	+1	+1	+1	0	0	0
+30	+1	+2	+2	+2	+2	+2	+4	+5	+5	+2	-2	-7	-9	-9	-6	-3	0	+1	+1	+1	+2	+1	+1	+1	+1
+20	+3	+3	+3	+3	+2	+2	+3	+5	+5	+3	-2	-9	-13	-14	-11	-6	-2	0	+2	+3	+5	+6	+5	+4	+3
+10	+5	+4	+3	+1	-1	-3	-3	-2	-1	-2	-6	-10	-13	-12	-8	-2	+2	+4	+6	+7	+8	+9	+9	+7	+5
0	0	-1	0	0	-1	-3	-4	-2	0	+2	0	-2	-5	-5	-3	0	+1	+2	+2	+3	+5	+5	+4	+2	0
-10	-1	0	+2	+3	+2	+1	0	+1	+3	+4	+5	+5	+4	+2	+1	-2	-4	-6	-6	-5	-3	-2	-2	-2	-1
-20	-3	-2	-1	0	0	-1	-4	-5	-5	-1	+5	+11	+15	+16	+12	+7	0	-5	-8	-8	-7	-6	-5	-4	-3
-30	-7	-6	-4	-3	-3	-5	-10	-14	-15	-9	+1	+14	+24	+28	+24	+16	+7	0	-5	-7	-7	-7	-7	-7	-7
-40	-4	-4	-2	0	+1	0	-3	-6	-7	-5	+1	+7	+12	+13	+11	+7	+2	-2	-4	-4	-4	-4	-3	-4	-4
-50	-1	-1	0	+1	+1	+1	0	-1	-1	-1	0	0	+1	+1	+1	+1	0	-1	-1	-1	0	+1	0	0	-1
-60	0	+1	+1	+2	+3	+3	+3	+3	+2	+2	+1	0	0	-1	-1	-2	-3	-3	-3	-3	-2	-2	-1	0	0
March																									
+60	-4	-5	-4	-2	-1	0	+1	+2	+2	+1	-2	-4	-5	-4	0	+3	+5	+5	+4	+4	+3	+2	0	-2	-4
+50	0	0	0	0	0	+1	+2	+3	+3	0	-4	-8	-9	-7	-2	+2	+4	+4	+3	+2	+2	+2	+2	+1	0
+40	+2	+2	+2	+2	+2	+3	+5	+5	+4	0	-6	-9	-10	-8	-4	-1	+1	+1	+1	+1	+2	+2	+2	+2	+2
+30	+2	+2	+3	+3	+4	+5	+7	+8	+6	+1	-6	-12	-15	-13	-8	-4	-1	+1	+2	+2	+3	+3	+3	+2	+2
+20	+3	+3	+3	+2	+3	+4	+7	+9	+7	+1	-7	-14	-17	-14	-9	-4	-1	0	+1	+3	+5	+5	+5	+4	+3
+10	+7	+5	+3	+1	0	-1	-1	-1	-2	-7	-13	-17	-18	-14	-7	-1	+3	+5	+7	+9	+11	+12	+11	+9	+7
0	+3	+2	+2	0	-1	-1	-1	0	-1	-4	-7	-10	-9	-6	-2	0	+2	+2	+3	+5	+6	+7	+6	+4	+3
-10	0	+1	+2	+2	+2	+2	+2	+2	+1	+1	+1	+2	+2	+2	+1	-2	-4	-5	-4	-3	-2	-2	-1	-1	0
-20	-3	-2	-2	-2	-2	-3	-4	-5	-5	-1	+5	+13	+17	+17	+12	+5	-1	-5	-6	-6	-6	-6	-5	-4	-3
-30	-8	-8	-6	-5	-3	-4	-8	-12	-14	-9	+3	+17	+27	+29	+24	+13	+4	-2	-5	-6	-6	-7	-7	-7	-8
-40	-2	-1	0	+1	+2	+2	-1	-5	-8	-7	-1	+6	+12	+14	+11	+6	+1	-2	-4	-5	-6	-5	-4	-3	-2
-50	0	0	0	+1	+2	+2	+2	+1	+1	+1	+1	+1	+1	0	-1	-2	-2	-1	-1	-2	-1	-1	-1	0	0
-60	+1	+2	+3	+3	+4	+4	+4	+3	+3	+2	+1	0	-1	-2	-3	-3	-4	-4	-4	-3	-3	-2	-1	0	+1
April																									
+60	-4	-4	-2	0	+2	+3	+3	+3	+2	-1	-4	-7	-7	-5	-1	+3	+5	+6	+5	+4	+3	+1	-1	-3	-4
+50	+3	+3	+3	+3	+3	+3	+3	+3	0	-4	-9	-13	-14	-10	-5	0	+3	+4	+4	+4	+4	+4	+3	+3	+3
+40	+4	+5	+4	+4	+4	+4	+4	+4	0	-4	-10	-14	-13	-11	-5	-1	+2	+3	+3	+3	+4	+3	+4	+4	+4
+30	+4	+4	+3	+2	+2	+4	+7	+8	+7	+1	-6	-12	-15	-13	-9	-4	-1	+1	+1	+2	+3	+3	+4	+4	+4
+20	+7	+6	+4	+2	+1	+3	+6	+8	+6	-1	-9	-15	-17	-14	-9	-4	0	+1	+2	+2	+3	+5	+6	+7	+7
+10	+10	+8	+4	+1	-1	-1	0	-1	-5	-10	-16	-18	-16	-11	-5	-1	+2	+4	+6	+8	+10	+11	+12	+12	+10
0	+5	+3	+1	-1	-2	-2	-1	-2	-4	-8	-10	-9	-6	-2	+1	+2	+2	+2	+3	+5	+6	+6	+6	+6	+5
-10	+2	+4	+4	+3	+3	+2	+1	0	-1	-2	-2	0	+2	+3	+2	0	-3	-4	-4	-4	-3	-1	0	+1	+2
-20	0	+2	+3	+3	+2	0	-1	-3	-4	-2	+2	+7	+11	+12	+9	+5	0	-4	-7	-8	-8	-8	-6	-3	0
-30	-4	-3	-2	-2	-1	-2	-5	-9	-12	-10	-1	+11	+21	+25	+21	+12	+4	-2	-4	-6	-7	-8	-8	-6	-4
-40	-1	+1	+1	0	0	0	-2	-4	-6	-5	-1	+5	+10	+12	+9	+5	+1	-1	-2	-4	-5	-6	-5	-3	-1
-50	0	0	+1	+1	+1	+2	+2	+1	+1	+1	+1	+1	+1	0	-1	-1	-2	-2	-1	-1	-1	-1	-1	-1	0
-60	+1	+2	+2	+3	+3	+4	+3	+3	+2	+2	+1	0	-1	-2	-2	-3	-3	-4	-3	-3	-2	-2	-1	0	+1

Table 1-N--Monthly mean solar daily variation on quiet days (S_q), geomagnetic vertical component (Z) in gammas, 1922-33--Continued

Geographic latitude	At local mean hour																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
													May												
+60	-2	-3	-2	-1	+1	+2	+3	+2	0	-3	-6	-9	-10	-7	-3	+2	+6	+8	+8	+7	+5	+3	+1	-1	-2
+50	+3	+3	+3	+3	+4	+4	+4	+3	0	-5	-10	-14	-15	-12	-7	-1	+3	+5	+6	+6	+5	+4	+4	+3	+3
+40	+2	+3	+4	+4	+4	+6	+6	+5	+2	-4	-10	-13	-13	-9	-4	0	+2	+3	+3	+2	+2	+1	+1	+2	+2
+30	+1	+1	+1	+1	+3	+6	+9	+10	+6	0	-7	-11	-12	-9	-5	-2	0	+2	+2	+2	+1	0	0	0	+1
+20	+6	+6	+4	+2	+2	+4	+7	+7	+3	-4	-11	-15	-14	-10	-5	-1	0	+1	+1	+2	+3	+3	+4	+5	+6
+10	+8	+6	+4	+2	+1	+1	+2	0	-4	-10	-15	-16	-13	-8	-4	-1	+1	+2	+4	+7	+8	+8	+8	+8	+8
0	+3	+3	+2	+1	+1	+1	+1	+1	-2	-6	-9	-9	-7	-4	-1	0	0	0	+2	+4	+5	+5	+4	+4	+3
-10	0	+1	+1	+1	+2	+2	+3	+3	+1	-1	-3	-2	0	+2	+2	0	-2	-3	-3	-1	0	0	-1	-1	0
-20	-2	0	+1	+1	+1	+2	+2	+2	0	-1	-1	+2	+5	+8	+7	+4	0	-4	-5	-5	-4	-4	-4	-4	-2
-30	-2	0	0	0	0	0	0	-2	-4	-6	-4	+2	+9	+14	+13	+9	+3	-2	-5	-5	-6	-6	-5	-4	-2
-40	0	+1	+1	+1	+1	0	0	0	-2	-3	-2	0	+4	+6	+6	+3	+1	-2	-3	-3	-3	-3	-3	-2	0
-50	0	+1	+1	+1	+2	+2	+2	+2	+1	0	0	0	0	0	-1	-1	-2	-2	-1	-1	0	-1	-1	0	0
-60	+1	+1	+2	+2	+2	+2	+2	+2	+2	+1	+1	0	-1	-1	-2	-2	-2	-2	-2	-2	-1	-1	-1	0	+1
													June												
+60	0	-2	-2	-1	0	+1	+2	+2	+1	-2	-5	-7	-8	-7	-3	+1	+4	+5	+5	+5	+4	+4	+3	+1	0
+50	+2	+2	+2	+2	+4	+5	+5	+4	+1	-4	-10	-13	-14	-11	-6	-1	+3	+4	+5	+5	+5	+5	+4	+3	+2
+40	0	+1	+2	+2	+4	+6	+7	+7	+4	-2	-8	-12	-12	-9	-4	0	+3	+4	+3	+2	+1	+1	0	0	0
+30	+1	+2	+3	+3	+4	+7	+9	+9	+6	-1	-8	-13	-13	-10	-6	-2	0	+2	+2	+2	+1	0	0	0	+1
+20	+6	+6	+5	+4	+4	+6	+8	+8	+3	-5	-13	-17	-16	-13	-8	-4	-1	+1	+3	+4	+4	+4	+4	+5	+6
+10	+7	+7	+5	+2	+1	+2	+4	+3	-2	-9	-15	-17	-15	-10	-6	-2	0	+3	+5	+7	+8	+7	+7	+7	+7
0	+4	+4	+3	+1	0	+1	+1	+1	-2	-7	-11	-12	-9	-6	-3	-1	+1	+2	+4	+6	+7	+6	+5	+4	+4
-10	+2	+2	+2	+2	+2	+3	+4	+4	+1	-2	-5	-5	-3	-1	-1	-2	-3	-3	-2	0	+1	+1	+1	+1	+2
-20	-1	0	+1	+1	+1	+2	+4	+4	+2	0	-1	0	+3	+5	+4	+1	-2	-4	-5	-4	-3	-3	-3	-2	-1
-30	-1	0	0	-1	0	+1	+2	+2	-1	-3	-3	+1	+6	+10	+10	+7	+1	-3	-6	-6	-5	-5	-4	-2	-1
-40	-1	0	0	0	0	0	+1	+1	+1	+1	+1	+2	+4	+5	+4	+2	-1	-3	-4	-4	-3	-3	-2	-2	-1
-50	+1	+1	+1	+1	+1	+1	+1	+2	+2	+2	+2	+1	+1	0	-1	-2	-2	-3	-3	-2	-2	-1	0	0	+1
-60	+1	+2	+2	+2	+2	+2	+2	+2	+2	+2	+1	+1	0	-1	-2	-3	-3	-4	-3	-3	-2	-2	0	+1	+1
													July												
+60	-2	-3	-3	-2	-1	-1	-2	-3	-5	-6	-7	-8	-8	-6	-2	+3	+7	+10	+10	+10	+8	+6	+3	0	-2
+50	+2	+2	+2	+2	+2	+3	+3	+3	0	-4	-8	-11	-12	-10	-5	0	+4	+6	+5	+4	+3	+3	+3	+3	+2
+40	+3	+3	+3	+3	+4	+5	+6	+5	+2	-3	-8	-12	-13	-10	-5	0	+3	+4	+3	+2	+2	+2	+2	+2	+3
+30	+3	+3	+3	+4	+5	+7	+9	+9	+5	-1	-8	-12	-13	-10	-6	-2	0	+1	+1	0	0	0	+1	+2	+3
+20	+4	+4	+4	+3	+4	+6	+8	+8	+4	-3	-10	-15	-15	-11	-6	-2	0	+2	+3	+3	+3	+2	+2	+3	+4
+10	+8	+6	+4	+1	+1	+2	+3	+1	-3	-10	-15	-18	-16	-11	-6	0	+4	+6	+7	+8	+7	+7	+7	+8	+8
0	+4	+3	+2	+1	+1	+3	+4	+2	-1	-6	-10	-12	-10	-7	-3	-1	+1	+2	+4	+4	+5	+5	+4	+4	+4
-10	+1	+1	+2	+3	+4	+5	+6	+5	+3	-1	-3	-4	-3	-2	-2	-3	-4	-4	-3	-1	-1	0	0	0	+1
-20	0	+2	+2	+1	+1	+1	+2	+2	0	-2	-3	-1	+3	+6	+7	+4	0	-4	-5	-4	-4	-3	-3	-2	0
-30	0	+1	+1	0	-2	-2	-1	-2	-4	-7	-6	-2	+7	+14	+15	+10	+3	-4	-6	-6	-4	-3	-3	-2	0
-40	+1	+2	+2	+1	0	0	+1	+2	+1	0	-1	0	+3	+5	+4	+2	-1	-4	-5	-4	-3	-2	-2	-1	+1
-50	+1	+2	+2	+2	+2	+2	+2	+2	+2	+2	+1	0	0	-1	-2	-2	-3	-3	-3	-2	-2	-1	-1	0	+1
-60	+1	+2	+2	+3	+3	+3	+3	+3	+2	+2	+1	0	-1	-2	-2	-3	-4	-4	-4	-3	-2	-2	-1	0	+1
													August												
+60	-5	-5	-3	0	+2	+2	+1	0	-2	-4	-6	-7	-7	-5	-1	+3	+7	+8	+8	+7	+6	+3	0	-3	-5
+50	+1	+1	+1	+1	+2	+3	+4	+3	+1	-3	-8	-11	-12	-9	-4	+1	+4	+5	+5	+4	+4	+3	+2	+2	+1
+40	+2	+2	+2	+2	+3	+5	+6	+6	+2	-3	-9	-12	-12	-9	-4	0	+3	+3	+3	+2	+2	+2	+2	+2	+2
+30	+3	+3	+3	+3	+4	+7	+9	+9	+4	-4	-11	-15	-14	-9	-4	0	+2	+2	+2	+1	+1	+1	+1	+2	+3
+20	+4	+4	+4	+3	+5	+9	+12	+12	+5	-5	-14	-18	-16	-11	-5	-1	+1	+1	+1	+1	+1	+1	+2	+3	+4
+10	+8	+7	+5	+3	+3	+4	+5	+2	-4	-13	-19	-21	-18	-12	-6	-2	+2	+5	+8	+9	+10	+9	+8	+8	+8
0	+3	+4	+3	+3	+3	+4	+3	+1	-3	-8	-13	-14	-12	-8	-5	-2	+1	+4	+6	+8	+8	+6	+4	+4	+3
-10	-1	+1	+2	+4	+5	+6	+7	+5	+2	-1	-5	-6	-6	-4	-3	-2	-2	-1	0	+1	+1	0	-1	-2	-1
-20	-3	-2	-2	-1	0	+2	+3	+3	0	-3	-4	-2	+2	+7	+9	+7	+4	0	-2	-2	-3	-3	-4	-4	-3
-30	-1	0	0	-2	-2	-1	0	-1	-4	-9	-10	-4	+5	+14	+17	+14	+6	-1	-4	-5	-4	-3	-3	-2	-1
-40	-1	0	+1	+1	+1	+1	+1	+1	0	-3	-3	-2	+2	+5	+7	+4	+1	-2	-3	-3	-2	-2	-2	-2	-1
-50	0	+1	+2	+3	+4	+4	+3	+2	+2	+1	0	0	0	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	0
-60	-1	+1	+4	+6	+7	+7	+6	+5	+3	+1	0	-2	-2	-3	-4	-4	-4	-4	-3	-3	-3	-3	-3	-2	-1

Table 1-N--Monthly mean solar daily variation on quiet days (S_q), geomagnetic vertical component (Z) in gammas, 1922-33--Concluded

Geographic latitude	At local mean hour																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
°	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
September																									
+60	-4	-4	-4	-3	-2	-2	-1	-1	-1	-2	-4	-5	-5	-3	0	+4	+6	+7	+8	+8	+7	+4	+1	-3	-4
+50	0	0	-1	-1	-1	0	+1	+2	+1	-3	-7	-10	-9	-5	-1	+3	+5	+6	+5	+4	+4	+3	+2	+1	0
+40	+2	+2	+2	+1	+1	+2	+3	+3	+2	-2	-7	-9	-9	-6	-3	0	+2	+2	+3	+3	+2	+2	+2	+2	+2
+30	+4	+4	+3	+2	+3	+5	+7	+8	+4	-2	-8	-12	-12	-9	-4	-1	0	+1	+1	+1	+1	+1	+1	+2	+4
+20	+8	+9	+7	+5	+5	+7	+10	+11	+6	-5	-15	-20	-19	-13	-6	-2	-1	-1	-1	0	0	+2	+4	+6	+8
+10	+11	+9	+5	+2	+1	+3	+5	+4	-2	-12	-20	-23	-20	-13	-6	0	+2	+4	+5	+6	+8	+9	+11	+12	+11
0	+7	+5	+3	+1	+1	+3	+4	+2	-3	-9	-14	-15	-12	-8	-4	-1	+1	+3	+5	+6	+6	+6	+6	+7	+7
-10	+1	+2	+3	+3	+5	+7	+8	+6	+2	-2	-4	-4	-3	-3	-3	-4	-4	-3	-1	0	-1	-1	-2	0	+1
-20	-3	-1	+1	+1	+2	+2	+2	0	-3	-5	-3	+2	+8	+11	+9	+5	+1	-2	-2	-2	-4	-6	-7	-6	-3
-30	-4	-3	-1	0	+1	0	-2	-6	-11	-12	-8	+3	+15	+22	+22	+15	+6	-2	-5	-6	-6	-6	-7	-6	-4
-40	-2	-1	-1	-1	-1	0	+1	0	-2	-4	-3	+1	+5	+8	+7	+5	+2	0	-1	-1	-2	-2	-3	-3	-2
-50	-1	0	+1	+1	+2	+2	+1	+1	+1	+1	0	0	-1	-1	0	0	0	0	-1	-1	-2	-2	-2	-1	-1
-60	-1	+1	+3	+4	+6	+6	+5	+4	+3	+1	-1	-2	-2	-3	-3	-2	-2	-2	-2	-2	-3	-3	-3	-3	-1
October																									
+60	-6	-5	-4	-2	-2	-2	-2	-1	0	0	-1	-2	-2	0	+3	+5	+5	+5	+5	+5	+4	+3	0	-4	-6
+50	0	+1	+1	-1	-1	-1	0	+1	+1	0	-4	-7	-7	-4	0	+2	+4	+3	+3	+2	+2	+3	+1	+1	0
+40	+1	+1	+2	+1	+1	+2	+3	+4	+3	0	-5	-8	-8	-6	-2	0	+2	+2	+2	+2	+2	+1	0	0	+1
+30	+2	+3	+3	+3	+2	+3	+5	+6	+5	+1	-5	-10	-10	-7	-3	-1	0	0	0	+1	+1	+1	0	+1	+2
+20	+4	+5	+5	+4	+4	+6	+9	+10	+7	-2	-10	-15	-14	-9	-4	-1	-1	-2	-1	0	0	+2	+2	+3	+4
+10	+8	+6	+4	+1	0	+1	+3	+3	-2	-10	-18	-21	-18	-11	-4	+1	+3	+4	+6	+8	+10	+10	+9	+8	+8
0	+3	+3	+2	+1	0	+2	+3	+2	-1	-7	-12	-14	-12	-7	-2	+1	+2	+3	+5	+7	+8	+7	+5	+4	+3
-10	+1	+3	+4	+4	+5	+5	+4	+3	0	-3	-4	-4	-2	-2	-2	-4	-5	-4	-2	0	+1	+1	0	0	+1
-20	0	+3	+4	+4	+2	0	-4	-10	-11	-9	-2	+8	+16	+19	+15	+8	+1	-4	-6	-6	-8	-8	-6	-4	0
-30	-5	-3	-2	-1	-2	-4	-10	-17	-21	-17	0	+15	+31	+38	+33	+20	+6	-3	-8	-9	-9	-9	-9	-7	-5
-40	-1	0	0	+1	+1	0	-1	-4	-6	-6	-1	+5	+11	+13	+11	+5	0	-4	-5	-5	-4	-4	-3	-2	-1
-50	+1	+1	+1	+1	+1	+2	+2	+1	+1	0	0	0	+1	+1	+1	0	-1	-2	-3	-3	-3	-2	-1	0	+1
-60	+1	+2	+2	+3	+4	+4	+3	+3	+2	+2	+1	0	-1	-2	-3	-3	-4	-4	-3	-3	-2	-2	-1	0	+1
November																									
+60	-3	-3	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	+1	+2	+3	+4	+3	+3	+3	+2	+1	-1	-2	-3
+50	0	0	0	0	0	0	0	+1	0	-1	-3	-4	-3	-1	+1	+3	+3	+2	+1	+1	+1	+1	0	0	0
+40	0	0	+1	+1	+1	+1	+2	+2	+2	-1	-4	-6	-6	-3	-1	+1	+2	+1	+1	+1	+2	+1	+1	0	0
+30	+1	+2	+3	+2	+2	+1	+2	+4	+5	+2	-2	-7	-9	-8	-4	-1	+1	+1	0	0	+1	+1	+1	+1	+1
+20	+4	+5	+4	+3	+1	+1	+2	+4	+5	+2	-3	-9	-12	-11	-7	-3	-1	+1	+1	+2	+2	+2	+3	+3	+4
+10	+7	+6	+4	+1	-1	-1	0	0	-1	-4	-8	-12	-12	-10	-7	-4	-2	0	+3	+6	+8	+9	+9	+8	+7
0	+4	+2	+1	-1	-2	-2	-1	0	0	-2	-4	-6	-6	-6	-5	-4	-3	-1	+3	+6	+8	+8	+6	+5	+4
-10	-1	-1	-1	-1	-1	-1	0	+2	+4	+5	+6	+6	+4	+1	-3	-6	-7	-6	-3	0	+1	+1	0	-1	-1
-20	-3	-1	+1	+1	0	-3	-5	-6	-4	+1	+8	+15	+18	+16	+10	+3	-4	-7	-8	-8	-7	-6	-6	-5	-3
-30	-5	-4	-2	-1	-3	-7	-13	-18	-17	-9	+4	+20	+30	+32	+25	+14	+2	-5	-8	-8	-7	-7	-7	-6	-5
-40	-2	-2	-1	-1	-1	-3	-6	-9	-11	-6	+1	+9	+15	+17	+13	+6	0	-4	-5	-4	-2	-2	-2	-2	-2
-50	+1	+1	0	0	-1	-1	-1	-2	-2	-1	0	+1	+2	+2	+1	0	0	0	-1	-1	0	0	+1	+1	+1
-60	+1	+2	+2	+3	+4	+4	+4	+3	+2	+2	+1	0	-1	-2	-2	-3	-4	-4	-4	-3	-2	-2	-1	0	+1
December																									
+60	-1	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1	-1	0	0	+1	+2	+3	+3	+3	+3	+3	+2	+1	0	-1
+50	0	0	-1	-1	-1	0	0	0	0	-1	-2	-3	-2	-1	+1	+2	+2	+2	+1	+1	+1	+1	+1	+1	0
+40	0	0	0	0	0	0	+1	+1	+1	0	-1	-3	-4	-3	-1	+1	+2	+2	+1	+1	+1	+1	+1	0	0
+30	+2	+2	+2	+2	+1	0	+1	+2	+3	+3	0	-4	-7	-7	-4	-1	+1	+2	+1	0	0	+1	+1	+1	+2
+20	+3	+4	+4	+4	+2	+1	+1	+3	+4	+3	-2	-7	-11	-10	-7	-2	+1	+2	+1	0	0	+1	+2	+2	+3
+10	+3	+2	+2	+1	0	0	0	0	-1	-3	-6	-8	-9	-8	-5	-2	0	+2	+4	+5	+6	+6	+5	+4	+3
0	+2	+1	0	0	-1	-1	-1	0	0	-1	-2	-4	-5	-5	-5	-3	-2	0	+3	+5	+6	+6	+5	+3	+2
-10	0	0	+1	+1	0	0	+1	+2	+4	+5	+5	+3	+1	-2	-5	-6	-5	-4	-2	0	+1	0	0	0	0
-20	-3	-2	-1	-1	-2	-4	-5	-4	0	+5	+10	+13	+12	+9	+4	-1	-4	-5	-4	-4	-3	-3	-4	-4	-3
-30	-5	-3	-2	-1	-3	-8	-14	-17	-15	-7	+6	+19	+27	+28	+22	+12	+3	-4	-7	-7	-6	-6	-5	-5	-5
-40	-3	-3	-2	-1	-1	-4	-6	-9	-8	-4	+2	+8	+13	+14	+12	+7	+3	0	-2	-3	-3	-3	-3	-3	-3
-50	0	0	0	0	0	0	-1	-1	-1	-1	0	0	+2	+2	+2	+1	0	0	-1	0	0	0	0	0	0
-60	+1	+2	+2	+3	+3	+4	+3	+3	+2	+2	+1	0	-1	-2	-2	-3	-3	-4	-3	-3	-2	-2	-1	0	+1

Table 1-0--Average departures of geomagnetic north component (X') at points in various latitudes and longitudes in the values of S_q, from the corresponding values averaged along parallels of latitude (Table L) at each hour GMT for winter (W), equinox (E), and summer (S), 1922-1933

Geographic latitude, φ	Season	00h																	
		For geographic east longitude in degrees																	
		0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
+60	W	0	0	0	+2	+2	+2	+2	+2	+3	+4	+4	+3	+3	+2	0	0	0	-1
	E	-2	0	0	+1	+1	+1	0	0	0	0	-1	-2	-2	-3	-3	-2	-2	-1
	S	+2	+2	+3	+4	+4	+2	+2	+2	+2	+4	+4	+4	+4	+4	+4	+2	+2	+2
+50	W	-2	-2	-2	-2	-2	-1	0	0	0	+1	+2	+2	+2	+2	0	0	-2	-2
	E	-3	-4	-5	-5	-4	-4	-4	-4	-4	-5	-6	-6	-8	-8	-10	-8	-6	-4
	S	+2	+2	+3	+2	+1	0	0	0	0	+2	+2	+2	+2	0	0	-1	0	-1
+40	W	-7	-8	-9	-8	-6	-5	-5	-4	-4	-2	-2	-1	0	0	-1	-2	-2	-3
	E	-4	-6	-10	-10	-10	-10	-10	-9	-8	-7	-6	-6	-6	-8	-7	-5	-4	-4
	S	-1	-2	-4	-6	-5	-4	-4	-4	-4	-2	-1	-2	-2	-4	-2	-2	-2	-3
+30	W	+1	0	-2	-6	-6	-4	-4	-4	-4	-4	-3	0	+2	+2	-2	-4	-6	-4
	E	+2	-2	-4	-8	-8	-8	-7	-6	-6	-6	-5	-4	-4	-6	-4	-2	-4	-2
	S	+4	+2	0	-2	-3	-3	-5	-5	-5	-4	-3	-4	-5	-4	-4	-4	-2	-4
+20	W	+11	+10	+10	+8	+7	+6	+6	-2	-2	-2	-2	-2	-1	-2	-3	-6	-8	-5
	E	+9	+8	+4	+1	0	0	0	-1	0	-1	-1	-1	0	0	0	-1	-2	-4
	S	+10	+10	+11	+10	+10	+6	+2	-2	-4	-3	-2	-1	-2	-2	-2	-2	-4	-5
+10	W	+14	+15	+18	+17	+16	+16	+14	+12	+10	+8	+8	+6	+4	+2	0	-2	-4	-2
	E	+14	+12	+10	+10	+9	+9	+9	+10	+10	+9	+8	+8	+7	+6	+4	+1	-2	-4
	S	+16	+16	+17	+17	+16	+14	+6	+2	0	+1	+3	+4	+4	+4	+2	0	-3	-6
0	W	+14	+14	+16	+18	+18	+17	+16	+17	+17	+17	+16	+15	+12	+9	+6	+2	0	-1
	E	+12	+16	+16	+20	+20	+20	+19	+20	+19	+18	+18	+17	+16	+12	+7	+2	-1	-5
	S	+18	+19	+18	+17	+16	+11	+6	+4	+6	+10	+10	+12	+10	+8	+5	+2	-1	-6
-10	W	+11	+11	+12	+12	+14	+14	+16	+16	+16	+16	+17	+16	+14	+12	+8	+4	+1	0
	E	+8	+10	+14	+16	+18	+20	+20	+19	+20	+22	+22	+20	+17	+14	+9	+3	-2	-8
	S	+15	+15	+14	+12	+10	+6	+5	+5	+9	+12	+14	+16	+14	+12	+8	+5	0	-6
-20	W	+8	+8	+8	+10	+11	+12	+13	+11	+12	+12	+11	+10	+8	+8	+6	+4	0	-2
	E	+2	+6	+9	+10	+10	+9	+10	+10	+10	+10	+10	+10	+10	+8	+6	+2	-2	-8
	S	+10	+10	+8	+6	+4	+2	+1	+4	+6	+8	+10	+10	+10	+10	+8	+6	+2	-6
-30	W	+2	+2	+2	+4	+6	+6	+6	+7	+5	+4	+2	0	0	0	-2	-2	-4	-4
	E	0	+2	+2	+3	+2	+2	+2	+2	+3	+4	+5	+4	+4	+4	+2	-1	-4	-4
	S	+2	+2	0	-2	-2	-3	-2	-2	0	0	+2	+2	+2	+4	+6	+5	+2	-5
-40	W	-1	-2	-1	0	0	0	-1	-3	-5	-6	-7	-7	-7	-8	-8	-9	-6	-4
	E	0	+2	+2	0	0	0	0	0	+1	+1	+2	+2	0	0	-2	-3	-4	-5
	S	-2	-3	-4	-6	-4	-3	-3	-3	-3	-4	-4	-4	-2	0	+4	+4	0	-4
-50	W	-1	-2	-2	-3	-3	-5	-6	-6	-8	-8	-9	-10	-8	-8	-6	-5	-3	0
	E	0	0	0	0	+1	+1	+1	+1	+2	+2	+1	0	0	-2	-3	-4	-4	-3
	S	-2	-2	-4	-5	-2	0	0	-2	-2	-4	-4	-6	-5	-2	+2	+2	0	-2
-60	W	0	0	0	-4	-4	-4	-4	-4	-4	-3	-4	-4	-4	-4	-4	-2	0	+4
	E	+1	-1	0	+1	+2	+2	+2	+2	+2	+2	+1	+1	0	0	0	-1	-1	0
	S	+1	+1	0	+1	+3	+3	+2	+1	0	-1	-2	-4	-4	-3	-2	-1	0	0

Table 1-0--Average departures of geomagnetic north component (X') at points in various latitudes and longitudes in the values of S_q, from the corresponding values averaged along parallels of latitude (Table L) at each hour GMT for winter (W), equinox (E), and summer (S), 1922-1933--Concluded

Geographic latitude, φ	Season	00h																		
		For geographic east longitude in degrees																		
		180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360
+60	W	-2	-1	-1	0	0	+2	+4	+4	+4	+4	+4	+3	+2	+2	+2	+2	+2	0	0
	E	0	0	0	0	-2	-3	-2	0	+1	+2	0	0	0	0	-1	-2	-2	-3	-2
	S	+1	-2	-4	-5	-6	-4	-2	-1	0	0	0	-2	-2	-2	-2	-1	-1	+1	+2
+50	W	-3	-4	-4	-2	-2	0	0	0	+2	+2	+2	+2	+2	+2	+2	+1	0	-1	-2
	E	-2	-2	-3	-3	-2	-2	-2	-1	+1	+2	+2	+2	+2	+2	+2	-1	-2	-2	-3
	S	-2	-4	-6	-8	-8	-8	-6	-2	+2	+4	+3	+1	0	0	-1	0	0	+1	+2
+40	W	-3	-3	-3	-2	-1	0	0	0	0	+1	+2	+2	+2	+2	+2	+2	+1	-2	-7
	E	-4	-4	-4	-5	-6	-5	-4	-2	0	+2	+2	+4	+4	+3	+2	+2	+1	-2	-4
	S	-4	-6	-8	-8	-8	-8	-6	0	+2	+4	+4	+4	+2	+1	+2	+2	0	0	-1
+30	W	-3	-4	-2	-2	-3	-3	-3	-2	-2	-1	+1	+4	+5	+6	+6	+6	+4	+3	+1
	E	-4	-4	-4	-7	-8	-8	-6	-4	-2	+2	+4	+5	+5	+4	+4	+4	+5	+5	+2
	S	-6	-8	-8	-10	-10	-9	-7	-2	+2	+4	+6	+6	+5	+3	+6	+6	+4	+4	+4
+20	W	-3	-6	-4	-2	-2	-2	-4	-2	-2	+1	+3	+6	+5	+2	0	+8	+10	+11	+11
	E	-6	-6	-6	-8	-8	-8	-8	-7	-3	+1	+3	+3	+3	+5	+5	+6	+8	+10	+9
	S	-8	-10	-11	-12	-12	-10	-9	-4	+2	+5	+8	+8	+6	+6	+7	+8	+6	+7	+10
+10	W	-3	-4	-4	-3	-4	-6	-6	-6	-1	-3	+3	+8	+4	+3	+1	+10	+11	+12	+14
	E	-7	-10	-10	-12	-12	-11	-10	-10	-9	-3	+1	+2	+1	+6	+6	+6	+10	+12	+14
	S	-10	-12	-14	-14	-14	-13	-12	-10	-3	+4	+7	+7	+9	+10	+9	+8	+9	+14	+16
0	W	-2	-2	-4	-6	-7	-8	-8	-8	-3	-4	0	-4	-1	-1	-2	+9	+10	+12	+14
	E	-10	-13	-14	-14	-15	-15	-14	-14	-15	-10	-7	-7	-5	-1	0	+4	+7	+9	+12
	S	-11	-16	-18	-16	-16	-15	-14	-12	-6	0	+3	+3	+1	+3	+4	+6	+10	+15	+18
-10	W	-1	-4	-6	-8	-10	-10	-10	-10	-3	-6	-7	-6	-8	-6	-6	+8	+9	+10	+11
	E	-12	-14	-16	-16	-17	-18	-17	-16	-17	-17	-17	-19	-15	-12	-9	0	+2	+5	+8
	S	-12	-22	-21	-19	-18	-16	-15	-14	-7	-7	-11	-13	-11	-10	-9	+6	+10	+13	+15
-20	W	-4	-6	-8	-10	-10	-12	-14	-14	-2	-5	-1	+5	-6	-5	-5	+3	+6	+6	+8
	E	-11	-12	-14	-15	-16	-18	-19	-20	-9	-10	-13	-15	-13	-10	-8	-5	-2	0	+2
	S	-12	-21	-22	-22	-19	-18	-17	-16	-1	-5	-8	-10	-10	-9	-7	+4	+7	+10	+10
-30	W	-5	-6	-8	-10	-10	-12	-13	-14	-14	-14	-12	-12	-10	-8	-4	-2	0	+2	+2
	E	-7	-8	-10	-11	-13	-14	-16	-16	-18	-18	-16	-15	-14	-12	-8	-6	-4	-2	0
	S	-10	-12	-16	-18	-20	-18	-16	-16	-14	-12	-11	-10	-7	-5	-2	0	+2	+2	+2
-40	W	-4	-6	-7	-7	-6	-8	-10	-12	-12	-12	-12	-10	-9	-7	-4	-4	-4	-3	-1
	E	-6	-5	-6	-6	-9	-10	-12	-13	-14	-14	-14	-13	-12	-10	-8	-6	-4	-2	0
	S	-8	-8	-10	-12	-14	-15	-15	-14	-14	-12	-12	-10	-8	-6	-4	-3	-2	-2	-2
-50	W	0	-2	-4	-4	-4	-6	-7	-9	-10	-10	-10	-10	-10	-8	-7	-4	-1	-1	-1
	E	-2	-2	-2	-2	-4	-5	-6	-8	-9	-10	-9	-8	-8	-7	-6	-4	-2	0	0
	S	-5	-6	-8	-8	-10	-10	-11	-10	-11	-12	-11	-10	-9	-8	-7	-4	-2	-2	-2
-60	W	+4	+1	0	+1	+2	0	-2	-5	-6	-6	-6	-6	-6	-4	-3	-2	-1	0	0
	E	+2	+2	+2	+2	+2	0	0	-1	-1	-2	-2	-2	-2	-3	-3	-3	-2	+2	+1
	S	-2	-4	-4	-4	-5	-5	-6	-7	-8	-8	-8	-8	-8	-8	-7	-2	0	0	+1

Table 1-P--Average departures of geomagnetic east component (Y') at points in various latitudes and longitudes in the values of S_q, from the corresponding values averaged along parallels of latitude (Table M) at each hour GMT for winter (W), equinox (E), and summer (S), 1922-1933

Geographic latitude, φ	Season	00^h																	
		For geographic east longitude in degrees																	
		0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
+60	W	+ 4	+ 1	+ 1	0	+ 1	+ 1	+ 2	+ 2	+ 2	+ 2	0	0	- 2	- 2	- 3	- 2	- 2	0
	E	0	- 1	- 1	0	0	0	0	0	- 2	- 2	- 2	- 1	- 1	- 2	0	0	0	0
	S	+ 2	+ 3	+ 4	+ 4	+ 4	+ 3	+ 2	+ 1	0	0	0	+ 1	+ 2	+ 2	+ 2	+ 2	0	- 2
+50	W	+ 4	+ 2	+ 2	0	0	+ 1	+ 1	+ 1	0	0	- 2	- 3	- 4	- 4	- 4	- 3	- 1	0
	E	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 1	0	0	0	0	+ 1	+ 2	+ 2	+ 4	+ 3	+ 2
	S	+ 3	+ 3	+ 4	+ 4	+ 2	+ 1	0	0	0	0	+ 2	+ 3	+ 4	+ 4	+ 6	+ 4	+ 1	0
+40	W	+ 2	+ 2	+ 1	+ 2	0	0	+ 1	+ 1	- 1	- 2	- 4	- 4	- 5	- 4	- 4	- 4	- 2	0
	E	+ 4	+ 4	+ 4	+ 4	+ 4	+ 2	+ 1	+ 2	+ 2	+ 1	0	+ 2	+ 2	+ 3	+ 2	0	0	0
	S	+ 4	+ 4	+ 4	+ 4	+ 2	0	- 2	- 2	- 1	+ 1	+ 4	+ 6	+ 8	+ 8	+ 6	+ 4	+ 1	0
+30	W	0	+ 1	+ 2	+ 3	+ 2	+ 2	+ 2	+ 1	0	- 2	- 4	- 4	- 6	- 5	- 4	- 4	- 2	- 1
	E	+ 4	+ 3	+ 2	+ 2	+ 2	+ 2	+ 1	+ 1	0	0	+ 1	+ 2	+ 2	+ 1	0	- 2	- 4	- 4
	S	+ 3	+ 4	+ 4	+ 6	+ 3	+ 1	- 2	- 2	- 1	+ 1	+ 4	+ 8	+10	+ 8	+ 4	+ 2	+ 2	0
+20	W	+ 2	+ 2	+ 4	+ 4	+ 5	+ 4	+ 3	0	- 2	- 3	- 4	- 6	- 5	- 6	- 5	- 5	- 4	- 3
	E	+ 2	+ 2	+ 3	+ 2	+ 2	+ 1	0	0	- 2	0	- 1	- 1	- 2	- 2	- 4	- 4	- 6	- 6
	S	+ 2	+ 2	+ 2	+ 4	+ 2	+ 1	0	- 2	- 2	0	0	+ 2	+ 6	+ 2	+ 2	+ 1	+ 1	+ 1
+10	W	+ 4	+ 4	+ 6	+ 6	+ 6	+ 4	+ 2	- 2	- 3	- 4	- 6	- 8	- 7	- 7	- 7	- 6	- 5	- 4
	E	+ 4	+ 5	+ 5	+ 5	+ 3	0	- 1	- 3	- 4	- 4	- 6	- 6	- 7	- 8	- 8	-10	-10	-10
	S	+ 2	+ 2	+ 2	+ 3	+ 2	+ 2	0	- 1	- 2	- 4	- 4	- 4	- 4	- 3	- 3	- 2	- 2	- 2
0	W	+ 4	+ 5	+ 6	+ 6	+ 4	+ 2	- 2	- 4	- 6	- 6	- 8	-10	-10	-10	- 9	- 8	- 6	- 5
	E	+ 5	+ 6	+ 7	+ 6	+ 4	+ 2	- 2	- 4	- 7	- 8	-10	-11	-12	-12	-12	-12	-13	-12
	S	+ 3	+ 4	+ 4	+ 5	+ 4	+ 2	0	- 2	- 5	- 6	- 7	- 8	- 9	- 9	- 8	- 8	- 7	- 8
-10	W	+ 3	+ 5	+ 6	+ 6	+ 2	- 2	- 6	- 7	- 8	- 8	-10	-12	-12	-12	-12	-10	- 8	- 6
	E	+ 6	+ 7	+ 9	+10	+ 6	+ 2	- 2	- 4	- 6	- 8	-12	-12	-12	-11	-12	-12	-12	-14
	S	+ 4	+ 4	+ 6	+ 8	+ 6	+ 3	0	- 4	- 5	- 6	- 8	-10	-11	-12	-13	-12	-12	-12
-20	W	+ 2	+ 2	+ 3	+ 2	0	- 2	- 4	- 6	- 6	- 6	- 6	- 6	- 8	- 8	- 9	- 8	- 6	- 3
	E	+ 4	+ 7	+ 8	+ 6	+ 4	+ 2	0	- 2	- 4	- 6	- 7	- 7	- 7	- 6	- 6	- 6	- 6	- 7
	S	+ 3	+ 4	+ 6	+ 5	+ 4	+ 2	0	- 3	- 4	- 5	- 6	- 6	- 6	- 7	- 7	- 8	- 9	-10
-30	W	+ 2	0	0	0	- 1	- 1	- 1	0	0	- 2	0	0	- 2	- 3	- 4	- 6	- 4	0
	E	+ 3	+ 4	+ 4	+ 3	+ 2	+ 1	0	0	- 1	- 2	- 2	- 3	- 3	- 3	- 2	- 1	0	0
	S	+ 1	+ 3	+ 5	+ 2	+ 1	+ 1	0	0	- 2	- 3	- 4	- 3	- 2	- 1	- 2	- 3	- 3	- 3
-40	W	+ 2	0	- 1	- 2	0	0	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	0	0	0	0	+ 2	+ 7
	E	+ 2	+ 2	+ 2	+ 1	0	0	0	+ 1	+ 2	+ 1	0	- 2	- 2	0	0	+ 2	+ 4	+ 6
	S	- 2	0	+ 2	0	0	0	0	0	+ 1	0	0	+ 1	+ 2	+ 2	+ 1	0	+ 2	+ 2
-50	W	+ 1	0	0	0	0	+ 2	+ 2	+ 1	+ 1	0	+ 2	+ 2	0	0	+ 2	+ 2	+ 4	+ 6
	E	+ 2	+ 2	+ 1	0	- 1	- 1	0	0	+ 2	+ 1	0	- 2	- 2	- 1	0	+ 2	+ 4	+ 5
	S	0	- 1	- 1	0	0	+ 1	+ 2	+ 1	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 1	+ 2	+ 4
-60	W	0	+ 2	+ 1	+ 2	+ 2	+ 2	0	- 1	- 2	- 2	0	0	- 1	- 2	0	0	+ 1	0
	E	+ 2	+ 2	+ 2	0	0	0	0	0	0	0	- 2	- 3	- 3	- 4	- 2	0	+ 2	+ 2
	S	0	- 1	- 1	+ 1	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 1	0	0	0	0	- 1	0	+ 2

Table 1-P--Average departures of geomagnetic east component (Y') at points in various latitudes and longitudes in the values of S_q, from the corresponding values averaged along parallels of latitude (Table M) at each hour GMT for winter (W), equinox (E), and summer (S), 1922-1933--Concluded

Geographic latitude, φ	Season	00h																		
		For geographic east longitude in degrees																		
		180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360
+60	W	0	0	0	-2	-3	-4	-4	-2	-1	0	+1	-1	-2	-4	-4	-4	0	+2	+4
	E	0	+2	+4	+4	+4	+2	+2	+1	+1	+2	+3	+2	+2	+2	+2	+2	+1	0	0
	S	-2	-2	-2	-2	-2	0	+1	0	0	0	-1	0	0	0	0	+1	+1	+2	+2
+50	W	+2	+3	+1	0	-2	-2	+1	+1	+2	+2	+4	+2	0	0	0	0	+2	+3	+4
	E	+2	+2	+2	+1	+2	+2	+3	+2	+3	+3	+2	+1	0	0	0	+1	+2	+2	+2
	S	-2	-2	-2	-2	-3	-2	-1	0	0	0	0	-1	-2	-2	-1	0	0	+2	+3
+40	W	+2	+2	+1	0	0	0	+2	+2	+2	+2	+2	+2	+1	+1	+1	+2	+2	+2	+2
	E	0	+1	0	-1	-1	0	+2	+4	+3	+2	0	0	-1	-1	0	+1	+2	+3	+4
	S	0	-2	-3	-4	-4	-4	-3	-2	0	+1	0	0	-1	-1	-2	0	0	+2	+4
+30	W	+1	+2	+2	+1	+1	0	+2	+2	+1	+1	+1	0	0	0	0	0	0	0	0
	E	-4	-2	-2	-2	-2	0	+2	+3	+1	-1	-2	-3	-3	-2	0	+1	+2	+3	+4
	S	0	-2	-3	-4	-4	-2	-2	0	+2	+2	+2	0	-1	-1	-1	0	0	+1	+3
+20	W	-1	+1	+2	+2	+3	+2	+2	+1	0	0	0	0	0	0	0	0	0	+1	+2
	E	-6	-6	-6	-4	-2	-2	-1	-1	0	0	0	0	0	0	0	+2	+2	+2	+2
	S	0	-1	-2	-2	-2	-1	0	0	0	0	0	0	0	0	0	+2	+2	+2	+2
+10	W	-2	0	+2	+4	+3	+2	+2	+2	0	0	0	0	0	0	0	0	+1	+2	+4
	E	-10	-8	-8	-8	-6	-6	-5	-5	0	0	0	0	0	0	0	+2	+3	+4	+4
	S	-3	-4	-4	-3	-2	0	0	0	0	0	0	0	0	0	0	+2	+2	+2	+2
0	W	-3	0	+2	+2	+2	+2	+2	+2	0	0	0	0	0	0	0	+1	+2	+3	+4
	E	-12	-11	-10	-10	-9	-8	-8	-8	0	0	0	0	0	0	0	+1	+3	+4	+5
	S	-8	-8	-8	-6	-4	-1	0	-1	0	0	0	0	0	0	0	0	+2	+2	+3
-10	W	-4	-1	+2	+2	+3	+2	+2	0	0	0	0	0	0	0	0	+3	+3	+2	+3
	E	-14	-13	-12	-10	-10	-8	-8	-8	0	0	0	0	0	0	0	+3	+2	+4	+6
	S	-14	-14	-12	-9	-6	-4	-2	0	0	0	0	0	0	0	0	0	+1	+2	+4
-20	W	+1	+2	+3	+2	+2	+4	0	0	0	0	0	0	0	0	0	+4	+3	+4	+2
	E	-8	-9	-10	-8	-7	-6	-4	-4	0	0	0	0	0	0	0	+3	+2	+2	+4
	S	-10	-11	-10	-8	-6	-4	-3	-2	0	0	0	0	0	0	0	0	+1	+2	+3
-30	W	+5	+4	+3	+2	+1	+3	+1	0	-2	-4	-6	-8	-6	-4	-2	+1	+2	+2	+2
	E	-1	-3	-4	-4	-4	-4	-3	-2	-2	-4	-5	-6	-4	0	+2	+2	+2	+3	+3
	S	-2	-3	-4	-4	-2	-2	0	0	0	0	-2	-2	-2	-1	-1	0	0	0	+1
-40	W	+6	+4	+2	0	0	+2	0	-1	-2	-3	-5	-8	-7	-4	-2	-2	0	+2	+2
	E	+6	0	0	0	-2	-2	-2	-1	0	-2	-3	-4	-4	-4	-2	0	+2	+2	+2
	S	+3	+2	+2	0	0	0	+2	+2	+2	0	0	-2	-4	-3	0	0	0	-2	-2
-50	W	+4	+1	0	-1	-2	+2	-2	-1	-1	0	-2	-4	-4	-2	-1	0	0	0	+1
	E	+4	+2	0	0	0	0	0	0	0	0	-1	-2	-2	-3	-2	0	+2	+2	+2
	S	+4	+2	+2	0	0	0	+2	+3	+2	+1	0	-1	-2	-2	-2	0	0	0	0
-60	W	0	-2	-2	-2	-2	+1	0	0	0	+2	+2	0	0	0	+1	+2	+2	0	0
	E	+2	0	-1	-1	0	0	0	0	0	+1	0	-2	-3	-4	-3	-2	0	+3	+2
	S	+2	+1	0	-1	0	0	0	+1	+2	0	0	-2	-2	-2	-2	-1	0	0	0

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933

Day	Compiled from Cheltenham data for month				Compiled from Apia data for month							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1905											
1	0.6	0.8	0.9	5.3 s	0.9	1.0	0.9	1.0 v	1.5	0.9	1.2	0.9
2	0.7	0.9	3.0	1.3	1.4	1.1	0.6	1.0 s	1.6	1.2	0.7	0.9
3	0.5	2.5	0.7 s	1.8	1.5	1.4	1.5	1.6	1.5 s	1.0	0.8	0.6
4	0.9	4.5 s	1.0	1.7	1.4	0.8	0.6	1.3 v	1.4	1.1	0.8	0.6 s
5	2.4 s	3.0 s	3.5	2.6	1.2 v	1.0	1.0	1.4	1.3	1.9	1.1	0.7
6	1.3	1.7 s	1.3	1.7	1.1	1.0	1.1 s	1.3	1.0	1.2	1.0	0.9
7	0.8	1.2	1.1	2.0	1.0	0.5	1.1	1.9	1.2	1.0	1.0	0.9
8	0.6	1.8	2.1 s	1.6	1.0	1.3 v	0.8	0.8	1.4	1.1	1.1	0.8
9	0.7	1.5	1.3	1.4	0.9	1.2 v	1.1	1.2	1.5	1.1	1.0	0.8
10	0.8	2.3	2.7	1.7	0.7	3.1 v	0.6	1.1	1.3	1.2	1.4	1.0
11	1.0	1.5	1.4	1.6	1.2	0.9	0.9	1.9	1.3	1.4	1.6	0.9 v
12	1.3	1.2	1.3	1.4	0.7	0.6	0.8 v	1.6	1.6	1.4	1.8 vs	1.2
13	0.6	1.2	1.3	1.1	1.4 v	1.3	0.8	1.7	1.6	1.1	1.7 s	0.8
14	0.4	1.2	0.8	0.8	1.3 v	1.0	1.0	1.1	1.7	1.6	1.5	0.8
15	0.8	0.8	1.5	1.3	1.4 v	1.2	1.3 v	1.4	1.6	1.3	0.7 s	0.9
16	0.5	1.3	0.7	0.4	1.3	1.0	1.2 v	0.8	1.8	1.5	0.9 s	0.9
17	1.1	0.5	0.7	0.6	1.3	0.7	1.4	0.7	1.6	1.0	1.1	0.9
18	0.8	1.1	1.1	0.8	1.7	0.8	1.4	1.4	3.1 vs	1.4	1.5	0.8
19	1.2	1.1	1.4	1.2	1.1	1.0	0.7	1.5	1.1	1.1	0.8	0.5
20	0.7	0.7	1.3	1.3	0.9	0.7	0.9	1.0	1.0	1.1 v	1.1	0.4
21	0.9	1.0	2.0	1.2	0.8	0.9	0.7	1.5	0.7	0.8 v	0.9	0.9
22	1.3	0.9	1.7	1.2	1.1	1.4	0.5	0.8	1.3	1.4	1.2	0.9
23	0.7	1.4	1.8	0.2	1.0	0.6	0.9 v	1.2	0.8	0.7 v	0.9	0.9
24	1.0	1.9	1.3	0.7	0.7	0.9	1.8 v	1.4	0.9	0.8	1.4	0.8
25	1.1	1.6	1.8	1.0	0.6	0.9	0.9 v	1.5	1.4	1.3	1.5	0.8
26	1.2	1.2	1.0	0.7	0.4	0.7	1.2 v	1.4 v	1.6	1.2	0.9	1.0
27	0.8	1.2	1.7	1.2	0.5	0.7	0.9 v	1.1	1.1	1.0	1.3	1.2
28	0.9	0.7	1.2	1.3	1.0 v	0.7	0.8 v	1.5	0.9 v	1.5 vs	1.6	0.8
29	1.7		1.1	1.6	1.0	0.7	0.9 v	1.4 v	1.2 v	1.2	1.2	1.0
30	1.0		1.3	1.3	0.7	0.7	1.3	1.4	1.6 v	1.3	0.7	0.8
31	3.4		0.6		1.0		0.9	1.3		1.2		0.8

Day	Compiled from Apia data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1906											
1	0.5	0.8	0.4	0.7	1.0	0.8 v	1.4	1.1	1.2	0.9	0.9	1.0
2	0.9 v	0.9	0.4	0.8	1.1	1.8 s	0.7	1.2	1.7	1.3	1.0	0.7
3	1.2 v	1.0 v	0.8 v	1.2	0.9	1.5	1.2 v	1.4	1.6	1.3	0.7	0.9
4	0.8 v	0.8	0.9 vs	0.8	1.3	1.2	1.7	1.7	1.5 s	1.2	0.9	0.7
5	0.8	0.7	0.6	0.7	0.9	1.5	2.1	1.9	1.0	1.3	0.8	0.7
6	0.7	0.8	0.8	0.6	1.6 v	1.4	1.5	1.4	1.1	1.3	1.1	1.0
7	0.5	0.7	0.4	0.9	0.9	1.5	1.2	1.7 vs	1.7	1.0	1.5	0.7
8	0.7	0.5	0.5	0.9	1.5	1.2	0.9	1.6 s	1.5	1.1	0.7	0.7 s
9	0.6	0.6	0.7	0.9	1.0 v	1.1	1.5	1.2	1.3	0.8	0.8	0.5 s
10	0.7	0.6	0.7	0.6	1.7 v	0.7	1.1	1.2	1.0	1.4	1.4	1.0
11	0.8	0.7	0.7	1.0	0.9	0.5	1.0 vs	1.5	1.0	1.2	0.3 v	0.6
12	0.7	0.7	0.7	0.6	1.0	0.6	1.2	1.4	1.3	0.9	0.6 v	0.3
13	0.9	0.9	0.8	0.8	1.6	0.9	0.9	1.2	1.2	0.8	0.6 v	0.6
14	0.9	1.0	0.6	0.8	1.0 v	0.8	1.0	0.8	1.4	1.2	0.9 v	0.9 v
15	0.5	0.4	0.5	0.8	0.8 s	1.7 v	1.3	0.9	1.8	1.1	0.8 v	0.4
16	0.8	0.6	0.3	0.8	0.8	0.9	1.4	0.9	2.0	0.6 v	0.9 v	1.0 s
17	1.0	0.6	0.6	0.8	1.0	0.7	1.0	1.4	1.6	1.1	0.9 v	0.9
18	0.8	0.8	0.3	0.9	1.3	1.3	0.9 v	1.3	1.5	1.4	0.5 v	0.8
19	0.7	0.2 s	1.0 v	0.8	1.8	1.3	1.6	1.6	1.4	1.1	0.6 v	1.0
20	0.8	0.8	1.0 v	0.7	1.4	0.8	2.1	1.4	1.4	1.3	0.6	0.7
21	0.8	0.8	1.0	0.7	0.8	1.0	1.7	0.9	1.4	1.0	0.5 v	1.3 v
22	1.0	0.7	0.9	0.7	1.0	1.0	1.6	1.7 v	1.8 s	0.7	0.6	0.9 vs
23	0.9	0.8	1.1	0.6	1.3	1.1	1.5	1.4	1.6 s	0.7	0.7	1.0 v
24	1.0	0.3 s	0.9	1.1	1.5	1.1	1.2 v	1.6	1.0	1.1	0.9	1.4 v
25	0.8	0.7 s	1.3 v	0.7	1.5	0.6	1.6	1.8	1.3	0.8	1.4	0.9 v
26	0.7	0.6 s	0.7	0.8	0.9	1.0	2.1	1.5	1.4	1.0	0.6	0.8 v
27	0.6	0.7	0.8	0.5	1.0	0.8	1.4	0.6	1.7	0.8	0.9	1.1 v
28	0.6	0.6 s	1.0	0.9	1.1	0.9	1.3	1.4	1.6 v	0.5 v	0.7	0.4 v
29	0.7		1.1	0.7	1.1	0.8	1.2 v	1.6 v	1.9	1.1	0.6 v	1.0 v
30	1.0		0.8	0.4	0.5	1.0	1.4 s	1.7	1.4	1.2	0.9	0.8 v
31	0.6 s		0.6		0.6		1.8	1.8 v		1.2		0.5 v

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Compiled from Apia data for month											
	Year 1907											
1	1.2 v	0.8	1.7	1.0	0.9 v	1.3 v	0.9 v	1.5	0.7	0.8	1.0	1.0
2	1.0 v	0.6	0.9	0.6	0.5	1.8 v	0.6	1.2	1.0	1.0 v	0.9	1.0
3	0.4	0.8	0.7	0.6	1.3	0.9	0.8	1.1	1.2	1.1	1.1	0.9
4	0.4	1.0	1.1	1.7 v	0.8 v	0.9	0.6	1.3	1.2	1.2	0.8	0.8
5	0.5	1.3	0.9	1.7 v	1.0 v	0.7	0.8	1.1	1.4	1.0	0.7	0.9
6	0.3	1.0	1.1	1.3 v	1.0 v	1.5 v	0.9	0.9	1.6	1.5	0.6	1.1
7	0.3	1.5	1.0	1.2 v	1.0 v	1.2 v	1.6	1.3	1.6	1.6	1.1	0.8
8	0.1	0.3 s	1.0	0.5	0.6 v	0.6	1.2	1.5	1.4	1.6	1.0	1.0
9	0.6 v	1.6 v	0.9	0.5	0.9	0.6	1.1	0.9	1.2	1.0	0.9	0.8
10	1.4 v	1.3 vs	1.3 s	0.7	1.0 v	0.9	1.3	1.1	0.6	1.3	0.8	1.1
11	1.0 vs	0.8 vs	0.3	1.3 v	1.0 v	1.2	0.9 v	1.2 v	0.6 s	1.3	0.7	0.7
12	0.7	0.6	2.6 s	1.0 v	0.8	1.0	0.6	1.3	1.6	1.4	0.9	1.0
13	0.4	0.8	0.8	1.2 v	1.4 v	0.5	0.8	1.9	1.3	1.1 s	0.9	1.0
14	0.9	0.6	0.5	1.3	0.9 v	1.3 v	0.7	1.3	1.2	0.8 s	1.1	1.0
15	0.9	0.7	1.3 v	1.2 v	1.2 v	1.3 v	0.6	1.5	1.4	0.8 s	0.9	1.0
16	0.9	1.0	1.3 v	1.2 v	0.5 v	1.0	0.5 v	1.0	1.6	0.9	1.2	0.8
17	1.2	0.5	1.2 v	1.1	0.9	0.9	0.9	1.1	1.2	1.1	1.4	0.7
18	1.1	1.3 v	0.6	1.0 v	1.4	0.7	1.1	1.2	1.0	1.5	1.0	0.8
19	1.1	1.2 v	0.9	0.9 v	1.5	1.2 s	1.0 v	1.0	1.4	1.4	1.2	1.0
20	1.4	0.5 v	0.9	0.9 v	1.2	0.6	0.8	1.6	1.1	1.4	1.4	0.9
21	1.0	0.5 v	0.8 s	0.9 v	0.7	0.5	1.2	1.6	1.0	1.2	1.0	1.0
22	0.9	1.6 v	0.9 v	1.0 v	1.3	1.0	1.4	1.2	1.5	1.8	0.9	0.9
23	0.7	1.3 v	0.8	1.2 v	0.6	1.0	1.2	0.9	1.3	1.3	1.1	0.8
24	0.4	1.4	0.8	0.8 v	1.5	1.0	1.1	1.1	1.4	1.7	0.8	1.2
25	0.2	1.2	0.7	1.0 v	0.8	1.4	1.1	0.9	1.6	1.5	0.7	1.1
26	0.6	0.9	0.8	1.4 v	1.5	1.1	1.2 v	1.0	1.7	1.1	0.9	0.8
27	0.7	1.2	0.6	1.6 v	1.4	1.5	1.2	1.6 v	1.5	0.8	0.9	1.1
28	0.6	1.9	0.7	1.0 v	1.2 v	1.1	2.6 s	1.1	1.5	0.4 v	0.8	1.0
29	0.5		1.0	1.0 v	1.3 v	1.1	1.8	1.1	2.2	0.9	0.8	1.0
30	0.7		0.9	1.0 v	1.4 v	1.3 v	1.1	1.1	1.8	0.9	0.8 v	0.8
31	0.5		0.9		1.4 v		1.4	1.4		0.8		0.8

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Compiled from Apia data for month											
	Year 1908											
1	0.9	0.9	0.6 s	0.3	1.4	0.6	1.3	1.3	1.0	0.3	0.8	0.8
2	0.8	0.8	0.7	0.5	1.3	1.2	0.9	1.6	1.0	0.8	0.8	1.0
3	0.8	1.0	0.3	0.5	0.9	1.0	1.5	1.7	0.9	1.0	1.0	1.1
4	0.6	1.0	0.6	1.0	1.0	1.5	0.9	1.7	0.9	1.5	0.8	1.1
5	0.9	0.8	0.5	0.9	0.8	1.3	1.7	1.3	2.8 s	0.8	0.8 v	2.1
6	0.8	0.8	0.9	1.1	1.2	0.6	1.2	1.5	1.0	0.5	0.9	0.9
7	0.6	0.2	0.7	1.2	0.3	0.8	0.8 v	2.2	1.2	1.0	1.1	1.1
8	0.9	0.4	0.9	1.0 v	1.0	1.0	1.4	2.1	1.9	1.1	2.0 s	0.8
9	0.9	0.7	0.8	0.7	0.8	0.8	1.3	3.3 s	2.0 v	0.9 v	0.8	0.7
10	0.9	0.6	0.7	0.8	0.5	1.0	1.2	1.4	2.0	1.2 v	0.7	1.3
11	0.6	0.9	0.8	0.9	0.6 v	1.1	1.2	1.6	1.2 s	1.3 v	0.8	1.2
12	0.6	0.7	1.0	0.7	0.8	1.3 v	1.5	1.7 s	5.7 s	1.6	0.8	1.0
13	0.6	0.8	0.8	0.6	1.3	1.2	1.5	1.7 v	0.7	1.4	0.8	1.3
14	0.7	0.5	0.8	0.7	1.6	0.8 v	1.2	0.9	1.0	1.6 v	0.9	0.7
15	0.8	1.2	0.8	0.9	1.0	1.5	1.2	1.2	1.9	0.9	1.1	0.9
16	0.9	0.9	0.9	0.3	0.9	1.1	2.4 s	1.2	1.9	1.6	0.7	1.0
17	0.8	0.7	1.0	1.0	2.1 v	1.0	1.0	0.9	1.4	1.8	1.0 s	0.9
18	0.7	1.0	0.6	0.4	1.0	1.2	0.7	1.4	1.7 v	0.9 v	0.6 v	0.9
19	0.6	0.8	0.9	0.8	1.2	1.3 v	1.2 s	2.6	0.6	0.8	0.9 v	1.1
20	0.5	0.7	1.1	0.5	1.0	1.3	1.2	0.9	1.2	1.2	0.4 v	0.9
21	0.6	0.8	0.7	0.7	0.6	0.6	1.0 v	1.4	1.3	1.2	1.0	1.1
22	0.7	0.8	1.2 v	0.8	0.4	0.9	1.8	0.9 v	1.5	1.0	1,2	1.0
23	0.8	0.6	1.4 v	0.5	2.0	1.0	1.4	1.4	1.5	1.0	1.1	1.1
24	0.6	0.7	0.9	0.3	1.3 v	1.1	1.5	0.7	1.7	1.2	1.1	0.8
25	1.0	0.2	0.8	0.4	1.4 v	0.9	1.9	1.5	1.6	1.0	1.1	0.7
26	0.8	0.7	0.7 s	0.5	1.8	1.5	1.8	1.5	1.5	1.2	1.1	1.3
27	0.5	0.7	2.0 s	0.7	0.6	0.8	1.6	2.0	1.8	0.8	1.1	0.6
28	0.6	0.8	0.9 s	0.4	1.2	1.5	1.3	2.6	1.6	1.0 v	1.3	0.9
29	1.1	0.5	0.4	0.7	1.1	1.0	0.9	2.4	3.2 s	1.3 v	0.9	1.0
30	0.5		0.4	0.5	1.0	1.0	1.7	1.8	3.3 vs	1.2 v	0.9	1.2
31	0.4		0.4		0.6		1.6	1.7		1.8 v		1.1

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Apia data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1909						
1	0.9	0.8 v	0.9	0.7	1.3	0.8	1.0	1.5	0.9	2.6	1.0	0.8 s
2	0.8 s	0.5	1.0	0.7	1.2	0.7	1.4	1.9	0.9	1.0	1.2	0.6
3	0.7	1.0	0.9	0.9	1.2	0.5	1.5	1.6	0.6	0.8	2.8	0.7
4	0.3 s	0.5	1.4	0.7	0.8	0.8	1.0	1.3	0.9	1.1 v	1.1	0.8
5	0.5	0.7	1.4 v	0.8	1.4	1.0 v	1.0	1.1	1.0	0.9	0.8	1.0
6	1.0	0.5	0.8	0.9	1.0	1.2 v	1.3	1.4	1.1	1.0	0.6	0.6
7	1.0	0.6	0.5	0.6	1.2	1.3 v	1.2	1.2	0.8	1.3	0.6 v	0.7
8	0.8	0.3	0.8	1.2 v	0.8	1.1	1.3 v	0.9	0.5	1.0 v	1.0 v	0.3
9	0.7	0.4	1.1	1.3 v	0.7	0.4	1.4	2.1	1.0	1.0	0.9 v	0.4
10	0.9	0.9	1.0	0.8	0.4	1.0	1.6	1.4	1.3	1.1	0.8 v	0.7
11	0.9	1.0	0.9	0.7	0.7	0.8	0.8	1.1	1.0	1.4 v	1.3	0.8
12	0.7	0.8	0.8	0.5	0.8	0.5	2.6	0.9 v	1.6	1.7 v	0.9	0.5
13	0.6	1.2	1.0	0.8	0.7	0.4	1.5	0.8 v	1.7	1.3 v	1.1	0.6
14	0.7	0.8	0.5	0.7	1.8 s	0.5	1.2	0.7	1.6	1.1 v	0.8 v	0.8
15	0.5	0.8	0.5	0.7	1.9 s	1.0	1.2	1.2	1.8	1.6 v	1.4	0.1
16	1.0	0.6	0.6	1.0	0.4	1.1	1.0	1.4 v	1.2	1.5	0.9	0.5
17	0.6	1.0	0.6	0.6	0.8	1.3	1.2 v	1.8 v	1.4	1.5	0.8	0.5
18	1.2	0.7	0.9	0.8	1.3 s	1.0	1.3 v	1.8 v	1.3	1.0 s	0.9	0.7
19	0.5	0.8	0.6 s	0.8	0.9 vs	0.5	1.2	2.5 v	1.4	0.8 s	0.7	0.6
20	0.7	0.7	0.7	0.6	1.0	0.9 v	1.2 v	1.9	0.9	0.6 v	1.3 v	0.5
21	1.0	0.9	1.2	0.8	0.9	0.4	1.5	1.4	2.0 s	0.5 v	0.3	1.3 v
22	0.9	1.2	0.6	0.8	1.0	1.0	1.5	1.8	0.4	1.2	1.1	0.5
23	0.7	0.7	1.2	0.6	0.9	1.1	2.2	1.2 v	1.5	2.4 s	0.8 v	0.5
24	0.7	0.7	1.0	0.4	0.8	1.0	2.1	2.0 v	0.7	0.3 s	0.4 v	0.8
25	1.3	0.6	1.0	1.3	0.7	0.8 v	0.9 v	0.9	0.9 s	0.7	1.0	0.6
26	0.4	0.7	0.4	1.0 v	1.6	1.1 v	0.8	1.6	1.4 v	0.7	0.9	0.7
27	0.5	0.8	0.6	1.3 v	0.7	1.1	0.6	1.7	1.3 v	0.8	1.1	0.6
28	0.7	0.7	1.1 v	0.4	0.5	0.6	0.6	1.3	4.4 v	0.8	1.1	0.6
29	0.3 s		0.7 s	0.4	0.5	1.4	1.1	2.5	1.3 v	0.8	1.4	0.7
30	2.6 vs		0.6 s	0.9	0.8	1.1	0.4	1.1	1.4 s	1.3	2.1	0.8
31	1.1 xs		0.8		0.6		0.6	1.3		1.2		0.5

Day	Compiled from Apia data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1910						
1	0.5	0.7	0.9	1.3 v	0.4	1.0	0.9	0.7	0.6	0.5	0.6	0.5
2	0.6	0.7	0.7	0.5	0.7	0.4	0.8	1.1	0.5	0.8	0.6	0.8
3	0.7	0.7	0.7	0.6	1.4	0.4	1.3	1.1	1.3 v	0.6	0.5	0.6
4	1.0 v	0.3	0.9	1.3	0.3	0.6	0.9	0.7	1.6 v	1.2 s	0.3	0.6
5	1.2 v	0.2	0.7	0.4	0.4	1.0	2.1	0.8	1.2 v	0.5	0.4	0.4
6	0.2	0.5	0.7	0.6	1.0	1.0	0.9	1.0	1.2 v	1.0 s	0.7	0.7
7	0.4	0.6	0.4	0.8	1.0	1.0	0.9	0.8	1.3 v	0.3	0.5	0.2
8	0.7	0.4	0.5 v	0.8	1.0	1.5	1.1	0.6	0.9	0.6	0.6	0.6
9	0.5	0.6	0.7	1.3 v	0.6	1.3	1.2	0.9	0.4	0.5	0.4	1.0
10	0.6	0.6	0.7	1.3 v	0.8	0.9	1.4	2.4 s	0.9	0.6	0.3	0.7
11	0.5	0.4	0.8	1.0	1.6	0.9	0.6	1.1	0.6	0.4	0.4 v	0.8
12	0.7	1.6 v	0.7	1.1	0.9	0.6	0.9	0.8	...	0.7	0.4 v	0.6
13	0.6	1.6 v	1.0	0.6	2.6 v	0.6	0.6	1.1	0.6	0.7 s	0.4	1.1
14	0.5	1.8 v	1.3	1.6 v	0.9 v	0.4	0.9	0.5	0.6	0.4	0.4	0.8
15	0.5	1.0 v	0.9	1.0 v	0.9 v	0.5	0.8	1.2	0.8	0.3	0.6	0.9
16	0.3	0.6	1.2	0.8	1.6 v	0.7	1.0	0.9	0.7	0.4	0.6	0.5
17	0.5	1.0	0.7	0.8 v	0.5	0.9	1.4	0.9	0.7	0.4	0.8	0.8
18	0.2	0.7	1.2	2.1 v	1.0 v	0.9	0.9	0.9	0.7	0.5	0.4 s	0.8
19	0.4	0.5	0.8	0.8 v	0.3	1.0	1.2 v	1.1	0.9	0.9 s	0.2	0.7
20	0.4	0.4	1.0	1.2 v	0.3	1.9 s	1.0	0.8	0.7	0.5	0.5	0.5
21	0.6	0.5	0.5	1.0 v	0.8	0.4	0.5	0.9	0.8	0.5	0.3	0.6
22	0.6	0.5	0.7	1.2 v	0.9	1.1	0.6	1.5 s	0.2	0.5	0.4	0.8
23	0.4	0.6	1.1	1.0 v	0.5	0.8	0.9	0.4	0.6	0.5	0.3	0.3
24	0.9	0.7	0.8	1.0 v	1.4	0.8	0.9	0.4	0.6	0.7	0.3	0.7
25	0.8	1.0	0.7	0.8 v	1.7 s	1.4	0.7	0.6	0.8 s	0.9	0.4	0.8
26	0.5	0.7	1.0	0.9 v	0.4	0.9	0.4	0.7	0.5	0.5	0.3	0.5 v
27	0.5	0.4	1.2	2.7 vs	0.6	0.7	0.5	0.7	0.6	1.2 vs	0.5	1.0 v
28	0.6	0.9	2.1 s	1.2 v	0.7	0.5	0.7	0.9	0.6	1.4 v	0.1	0.5
29	1.0 v		1.0	0.6 v	1.0	0.7	0.8 v	1.1	0.6 s	0.7	0.3	0.3 s
30	0.8 v		0.9	0.8 v	0.8	0.7	0.8	0.8	0.4	0.6	0.3	0.3
31	0.4		0.9 vs		1.1		0.9 v	0.6		0.4		0.7

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1911						
1	1.0	0.4	1.0	1.0	0.9	0.6	1.6	0.9	0.5	0.8	0.9	0.9
2	1.2	1.0	0.6	0.9	1.4	1.0	0.9	0.9	1.0	0.7	0.8	0.7
3	0.9	0.7	1.1	0.8	1.3	0.7	0.8	1.8	0.7	0.7	0.7	0.7
4	0.9	0.8	0.8	1.0	0.9	0.8	0.8	1.0	0.7	1.0	0.7	0.7
5	1.5	1.2	0.9	0.9	0.9	1.0	0.8	0.8	0.9	0.8	0.7	0.6
6	0.7	0.8	0.6	1.0	0.5	0.9	0.8	0.6	0.6	0.8	0.9	0.6 s
7	0.9	0.6	1.0	0.8	1.9	0.5	0.9	0.9	0.5	1.2	0.7	0.5
8	0.9	0.9	1.2	0.8 s	0.3	0.7	1.1	1.0	1.3	0.9	0.8	0.7
9	0.9	0.9	0.5	1.7 s	1.0	0.8	1.0	1.1	1.0	0.6	0.7	0.5
10	1.3 v	0.6	0.9	1.1	0.9	0.6	0.9	1.2	1.0	0.9 s	0.7	0.9
11	0.8	0.8	0.8	0.8	1.0	0.6	0.7	1.0	0.8	0.5 s	0.8	2.3 s
12	0.5	0.7	1.0	1.1	0.9	1.0	0.5	0.7	0.8	0.6	0.9	0.6
13	0.9	1.1	0.8	0.8	1.0	0.5	0.9	1.5	0.8	0.4	0.7 s	0.7
14	0.9	0.9	1.5	1.0	1.1	1.1	0.8	0.9	1.2	0.8	0.6	0.9
15	0.9	0.8	0.9	1.0	1.4 s	0.6	0.7	1.1	0.7	0.8	0.3	0.5
16	1.3	0.5	1.1	1.0 s	0.9	0.8	1.0	0.9	0.7	0.7	0.5	0.5
17	1.1	1.0	1.1	0.7	1.1	0.6	0.8	1.0	0.3	1.2	0.8	0.7
18	1.4	0.6	0.8	0.8	0.6	0.9	0.8	0.8	0.2	1.0	0.7	0.9
19	1.4	0.6	0.4	0.6	0.8	1.0	0.5	0.6	0.6	0.8	0.7	0.6
20	0.5	0.4	2.5 s	0.8	1.0	1.1	0.8	0.9	1.4 s	0.7	0.9	0.8
21	0.7	1.0 s	0.7 s	1.0	1.5	1.1	0.5	0.8	0.9	0.5	1.1	0.6
22	0.8	0.8 v	0.7	0.5	1.3	0.6	0.6	0.9	0.8	0.5	0.7	0.6
23	0.6	0.4	1.1	0.6	1.0	0.6	0.5	1.9 s	0.1	0.8	0.7	0.7
24	0.5 s	0.5	0.7	0.6	0.8	0.7	0.6	0.5	0.9	0.8	0.8	0.5
25	0.7	0.7	0.7	0.5	0.3	0.7	0.6	0.5	0.9	0.6	0.9	0.9
26	0.4	0.6	0.8	0.4	0.9	0.5	1.0	1.2	0.6	0.6	0.7	1.3
27	1.1	0.6	1.0	0.5	0.8	1.0	0.7	0.6	0.6	0.9	0.5	0.6
28	0.7	0.7	1.0	0.9	0.7	1.0	2.0	0.7	1.2	0.5	0.7	0.8
29	0.6		0.9	0.8	0.7	1.4	1.2 s	1.0	1.0	0.6	0.7	0.7
30	0.7		1.2	0.9	1.1	1.1	0.8	0.4	1.3	0.8	0.8	0.6
31	0.7		1.0		1.1		1.0	0.8		0.6		0.5

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1912						
1	0.5	0.6	0.7	1.0	0.8	1.2	0.6	1.0	0.7	1.9	1.2	0.5
2	0.3	0.6	0.5	1.1	0.7	1.0	0.9	1.1	0.7	0.6	0.8	1.0
3	0.7	0.6	0.9	1.0	0.6	0.7	0.9	0.9	0.6	0.6	0.8	0.8
4	0.4	0.4	0.8	0.8	0.5	0.7	1.3	1.0	0.9	0.8	0.7	0.5
5	0.5	0.7	0.8	0.9	1.4	0.7	0.8	1.1	0.7	1.0	0.6	0.5
6	0.8	0.6	0.7	0.6	1.0	0.6	1.3	1.6	0.7	1.0	0.6	0.9
7	1.0	0.6	0.7	0.5	0.9	0.9	0.7 s	0.7	1.0	0.9	0.9	0.7
8	0.9	0.8	0.9 s	0.8	0.7	1.0	0.9	0.3	0.7	0.8	0.7	0.7
9	0.6	0.6	0.6	0.7	0.9	0.5	0.8	0.8	0.7	1.1	0.7	0.7
10	1.2	0.7	0.7	1.4	0.6	0.6	0.5	0.5	0.4	1.0	1.5	0.7
11	0.6	0.5	0.6	0.6	0.7	1.0	0.7	0.8	1.1	0.6	1.0	0.7
12	0.7	0.7	0.9	0.5	1.2	0.6	1.1	1.1	1.2	0.9	0.7	0.9
13	0.7	0.4	0.7	0.7	0.9	1.0	0.8	1.3	0.8	0.8	0.9	0.5
14	0.8	0.8	0.6	0.4	0.8	0.9	1.0	1.2	1.2	1.1 s	1.6	0.9
15	0.6	0.7	0.6	1.4	0.6	0.4	0.9	1.0	1.0	0.8	0.6	0.9
16	0.6	0.6	0.7	0.8	0.6	0.6	1.1	0.9	0.9	0.7	1.1	0.7
17	1.1	0.3	0.7	0.7	0.6	0.8	0.7	1.2	1.0 s	0.7	0.6	0.7
18	0.5	0.3	0.9	0.8	0.5	0.5	0.4	1.0	0.5	0.7	0.9	1.1
19	0.6	0.8	0.7	0.7	0.9	0.8	0.7	0.6	0.7	0.8	0.7	0.8
20	0.6	0.5	0.9	0.7	1.2	1.2	0.9	0.9	0.7	0.9	0.7	0.7
21	0.6	0.5	0.9	0.6	0.8	1.0	0.7	1.3	0.7	0.6	0.7	0.4
22	0.4	0.7	0.7	0.8	0.4	0.8	0.8	1.0	0.6	0.7	1.4	0.7
23	0.7	0.7	1.0	0.7	0.7	0.8	0.6	1.0	1.2	0.7	0.9	0.9
24	1.2	0.6	1.0	0.7	0.6	0.8	0.8	0.9	1.5 s	0.8	0.8	0.5
25	0.6	0.7	1.0	0.6	0.7	0.6	0.5	0.6	0.8	0.7	0.8	0.8
26	0.8	1.1	0.8	0.6	0.6	0.8	0.9	0.8	0.5	0.5	1.4	0.6
27	0.5	0.6	0.6	0.6	0.6	1.1	0.8	0.9	1.0	0.7	0.8	0.3
28	0.6	0.5	0.7	0.7	0.6	1.0	0.7	0.9	0.8	1.1	0.7	1.0
29	0.4	0.4	0.5	0.6	0.6	0.8	0.8	1.0	0.7	1.0	0.8	0.7
30	0.5		0.7	0.4	1.1	0.7	1.2	0.7	0.7	0.8	0.5	0.6
31	0.4		0.9		0.9		0.7	0.9		0.8		0.4

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1913						
1	0.7	0.7	0.4	0.7	1.1	1.2	0.8	1.0	0.5	0.6	0.8	0.3
2	0.6	0.5	0.7	0.8	1.0	0.7	0.5	0.7	0.5	0.7	0.7	0.3
3	1.5	0.6	0.6	0.6	1.2	0.9	0.5	0.5	0.3	0.8	0.4	0.3
4	0.8	0.8 s	0.7	1.0	1.2	0.7	0.7	0.5	1.0	0.8	0.5	0.2
5	0.5	0.8	0.4	1.0	1.0	0.5	0.8	0.7	0.2	1.0	0.7	0.4
6	0.6	1.0	0.8	1.0	0.6	0.9	0.6	0.8	0.9	1.4	0.6	0.2
7	0.7	0.8	0.7	0.9	0.3	1.1	1.0	0.9	0.7 s	1.0	0.3	0.4
8	0.7	0.8	1.1	0.9	0.7	0.8	0.7	0.4	0.7	0.8	0.6	0.2
9	0.7	0.8	0.8	1.0 s	0.6	1.2	0.7	1.0	0.8	0.8	0.8	0.1
10	0.6	0.8	1.1	0.6	0.6	0.6	0.9	0.7	0.8	0.8	0.6	0.2
11	0.9	0.7	0.8	0.6	0.8	0.9	0.8	0.9	1.1	0.6	0.5	0.3
12	0.8	1.3	0.7	0.9	0.8	0.8	0.8	1.0	0.7	0.7	0.7	0.2
13	0.8	0.5	1.0	0.9	0.6	0.5	0.8	1.0	0.9	0.7	1.1	0.1
14	1.1	1.0	1.5 s	0.8	0.6	0.5	0.8	0.6	0.6	0.8	0.8	0.2
15	0.8	0.4	0.7	1.0	0.5	0.9	0.8	0.8	0.8	0.6	0.4	0.3
16	0.6	0.6	0.8	0.5	0.4	0.7	0.4	0.7	1.3	0.7	0.5	0.3
17	0.8	0.5	0.8	0.9	1.1	0.9	0.7	0.9	1.2	0.4	0.5	0.2
18	0.9	0.7	0.8	0.6	0.5	0.7	0.8	1.3	0.9	0.5	0.7	0.2
19	0.4	0.8	0.8	0.6	0.8	0.9	0.5	0.7	1.0	0.5	0.6	0.3
20	0.5	0.5	0.9	0.8	0.6	0.8	1.0	1.2	1.2	0.8	0.6	0.2
21	0.8	0.9	1.2	0.8	0.5	0.7	0.6	0.6	1.3	0.4	0.5	0.3
22	0.7	1.0	0.7	0.6	0.5	0.7	0.6	0.8	1.2	0.9	0.4	0.5
23	0.8	0.8	0.9	0.7	0.7	0.7	0.4	1.2	0.6	0.7	0.6	0.2
24	1.0	0.7	0.9	0.7	1.0	0.9	0.7	0.9	0.8	0.7	0.4	0.2
25	1.4	1.2	0.9	0.9	0.7	0.8	1.1	0.8	0.9	0.9	0.5	0.3
26	0.9	1.4	1.0	0.5	0.9	0.8	0.7	0.7	1.1	0.5	0.2	0.2
27	1.3	0.6	1.1	0.6	0.7	0.6	0.7	0.4	1.0	0.6	0.4	0.2
28	0.7	0.8	1.1	0.5	0.7	0.7	0.7	0.4	0.8	0.8	0.3	0.3
29	0.9		0.9	0.9	0.8	0.9	0.8	0.6	0.9	0.6	0.1	0.3
30	1.2		0.7	0.6	0.7	0.6	0.6	0.5	1.0	0.7	0.3	0.4
31	0.7		0.8		0.7		0.7	0.7		0.7		0.2

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1914						
1	0.2	0.8	0.8	0.9	1.2	1.1 vs	0.8	0.8	0.6	0.7	0.9	1.0
2	0.3	0.6	0.6	0.4	0.7	0.6	1.2	0.7	0.6	0.6	0.7	0.6
3	0.7	0.8	0.9	0.8	1.2 v	0.6	0.7 s	1.4	0.6	0.7	1.3	0.9
4	0.7	0.8	0.7	0.7	0.9 v	0.6	0.7	0.8	1.2 v	1.0	1.6	1.0
5	0.8	0.5	0.6	0.8	1.1	0.5	2.5	0.9	1.7 v	0.9	0.9	1.1
6	0.9	1.0	0.7	1.9	1.0	0.8	0.8	0.9	1.6 v	0.9	0.8	1.0
7	0.6	0.6	0.9	0.9 s	0.5	0.9	0.4	0.5	0.6	0.6	1.0	0.7
8	0.3	0.8	0.7	0.3	0.9	0.9	1.0	0.9	0.6	0.4	0.8	0.9
9	0.5	0.6	1.1	0.6	0.9	0.5	0.9	1.0	1.7 v	1.0	1.1	0.7
10	0.3	0.5	0.8	0.7	0.8	0.8	0.7	0.6	0.6	1.1	0.8	0.9
11	0.8	0.8	1.0	0.8	1.1	0.5	0.6	0.8	0.7	1.1	1.8	2.7
12	0.7	0.7	0.8	0.7	1.1	0.7	0.9	0.7	1.1	0.8	0.8	2.7
13	1.2	0.7	0.7	0.9	0.7	0.6	0.8	1.0	0.5	1.2	0.5	2.9
14	1.0	0.6	1.0	1.1	1.1	0.7	0.8	1.1	1.3 v	1.0	1.0	2.5
15	0.8	1.0	0.8	0.9	0.8	1.0	1.3 v	0.9	1.2 v	0.7	0.7	1.4
16	0.7	0.5	0.9	0.9	0.7	1.2	0.8	0.7	0.9	0.9	1.0	0.7
17	1.1	0.9	0.8	0.5	1.0	0.8	0.8	0.8	0.9	1.0	0.8	1.1
18	0.7	0.8	0.7	0.5	0.7	1.1	0.6	0.6	0.9	1.1	0.8	0.6
19	1.0	1.0	1.0	0.8	0.6	1.2	0.9	0.4	0.8	1.0	1.0	0.9
20	0.9	0.5	0.8	0.7	0.6	0.7	0.7	0.3	0.6	1.0	0.9	0.6
21	0.6	0.5	0.8	0.7	0.6	1.0	0.9	0.7	0.7	1.0	1.2	1.0
22	1.1	0.3	0.8	0.7	1.0	0.7	0.5	0.7	0.6	1.0	1.0	0.6
23	0.7	0.6	0.9	0.9	0.7	0.7	0.3	0.6	1.3	0.8	1.0	1.0
24	0.7	1.1	0.9	0.6	0.7	0.9	0.8	0.7	0.2	1.0	1.0	0.9
25	0.6	0.9	0.7	1.0	0.3	1.4	1.2	0.9	0.9	0.9	0.8	1.0
26	1.0	0.9	1.0	1.1	0.7	0.9	0.7	0.5	0.6	1.0	0.7	1.1
27	1.0	1.0	0.8	1.0 v	1.0	0.5	0.6	0.8	0.9 s	1.1	0.4	1.1
28	0.9	0.8	0.8	1.0 v	1.2	0.5	0.9	0.7	0.5 v	2.0 s	0.9	0.5 s
29	0.9		0.9	1.2 v	1.0	0.8	1.3 s	1.1	0.9	1.6 s	0.7	0.8
30	0.9		0.8	0.9	0.9	0.8	0.5	0.9	0.5	0.7	0.5	0.6
31	0.7		1.1		0.6		0.4	0.4		0.8		0.9

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Compiled from Manila data for month											
	Year 1915											
1	1.0	1.2	0.8	0.9	1.6	0.9	1.1	1.3	1.2	1.1	1.3 s	1.1
2	0.7	1.2	1.0	0.9	0.7	1.0	1.1	1.7	1.4	0.6	0.8	0.6
3	0.9	1.3	0.9	1.2	1.1	0.8	0.9	1.2	1.0	1.1	0.6	0.7
4	1.4	1.1	0.8	1.1	1.1	0.8	0.9	1.3	1.0	0.6	0.8	0.7
5	1.4 s	1.1	0.9	1.2	1.1	0.8	1.1	1.5	1.0	0.9	0.8 s	0.7
6	1.0	1.0	1.0	1.1	1.1	0.6	1.9	1.2	1.4	1.0	2.0 s	1.3 s
7	1.0	0.7	1.3	1.2	1.1	0.7	1.0	0.7	1.2	0.8	0.8	0.6
8	0.8	1.2	0.9	1.2 s	0.8	1.4	0.7	1.0	0.9	0.9	0.7	0.8
9	0.9	0.8	1.1	0.9	0.8	1.1	1.1	1.1	0.9	1.1	0.7	1.0
10	0.9	0.9	1.0	1.1	1.0	0.8	1.0	1.0	1.4	1.1	0.8	1.0
11	0.6	0.8	1.1	1.2	1.0	0.6	1.0	0.7	1.1	1.1	0.9	0.6
12	1.2	1.4	0.8	0.6	1.0	2.1	1.0	1.3	1.3	0.7	0.8	0.5
13	0.5	0.9	1.2	0.8	1.1	0.7	0.9	1.2	1.1	0.8	0.8	0.7
14	0.8	1.2	1.3	0.9	1.0	0.7	0.9	1.0	0.8	1.3 s	0.7	1.2
15	0.4	1.3	1.4	1.1	0.9	0.6	0.9	1.0	1.1	1.9 s	0.6	1.2
16	1.1	1.2	1.0	1.3	1.0	0.6	1.2	1.0	1.2	0.3	1.2 s	1.2
17	0.7	1.3	0.8	0.6	0.5	2.3 s	1.0	1.9	1.3	1.2	1.3 s	0.5
18	0.6	0.9 s	0.8	1.3	0.8	1.0 s	1.2	1.0	1.0	1.3	0.8 s	0.5
19	0.4	1.3	0.9 s	1.2	0.7	1.3	1.1	1.3	1.5	1.8 s	0.7	1.0
20	0.9	0.8	0.9 s	0.5	0.4	1.0	1.2	1.2	1.0	1.2	0.7	1.0
21	0.9	1.0	1.4 s	0.9	1.2	0.7	1.0	1.0	1.3	0.5	0.4	1.0
22	0.9	0.8	0.8	0.9	0.7	1.2	1.2	0.8	1.6 s	0.8	0.7	0.7
23	0.9	0.9	1.1	1.0	0.9	0.8	0.7	0.7	0.9 s	0.9 s	0.7	0.7
24	0.8	1.0	1.0	0.8	0.6	0.9	1.2	1.5	1.1	0.4 s	1.0	0.7
25	1.3	1.0	1.2	1.0	0.6	1.8	0.8	1.2	0.9	1.1 s	0.8	0.8
26	0.9	0.8	0.6	1.5	1.0	1.0	1.3	1.2 s	0.8	0.8	1.1	1.1
27	0.9	0.8	0.7	1.0	1.3	0.8	1.0	0.9	1.0	0.9	0.7	0.5
28	0.7	0.6	0.7	0.9	0.9	1.0	0.9	1.0	0.9	0.6	0.4	0.7
29	0.7		0.9	1.1	1.1	0.6	0.9	1.3	0.4	1.1	0.8	0.7
30	0.7		1.4	0.9	1.2	1.4	1.3	0.9	1.4	0.8	0.8	1.4
31	1.0		1.0		0.8		1.2	1.3		0.5		0.5

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Compiled from Manila data for month											
	Year 1916											
1	0.7	0.8	1.0	1.0	1.6	1.7	1.7 s	1.0	0.5	1.1	0.8	1.1
2	0.6	0.8	0.8	1.0	1.8	1.1	1.3	2.2	1.0	0.8	1.1	0.9
3	1.2	0.8	1.0	1.2	1.8	1.0	0.6	0.6	0.9	1.0	1.4	1.3
4	0.8	1.2	0.5	1.3	1.6	1.3	0.9	1.0	1.2	0.7	1.0	0.6
5	1.2	1.4	1.1	1.5	1.8	1.0	1.0	0.4	0.7	1.6	1.1	1.2
6	0.9	1.0	0.9	1.4	2.0	1.2	1.5	1.8 s	0.7	1.6 s	0.7	0.7
7	1.1	1.3	0.5	1.1	1.1	1.2	1.0	0.9	1.2	1.8 s	0.8	1.1
8	1.2	1.3	1.8	1.2	0.9	1.6	1.0 s	1.0	0.9	1.1	0.8	1.4
9	1.1	1.1	1.2 s	1.1	0.9	1.1	0.7	1.1	1.3	1.4	0.9	1.5
10	1.2	1.0	1.2 s	1.2	1.3	1.6	1.0	1.0	0.9	1.2	0.9	0.8
11	1.7 s	0.8	1.2 s	1.0	1.4	0.9	0.5	1.2	1.0	1.1	1.2	1.1
12	0.9 s	1.1	0.8	1.2	1.4	0.9	1.1	0.7	1.1	1.0	1.4	1.4
13	0.8 w	0.8	0.8	1.0	1.2	1.3	1.1	1.0	0.6	1.2 s	0.7 s	0.6
14	0.4	0.8	1.1	1.2	0.9	1.0	0.8	0.7	1.1	1.0	0.9	1.2
15	0.7	0.7	0.8	0.9	0.8	1.3	1.1	1.1	1.0	1.2	0.9	1.0
16	0.7	0.6	1.1	0.4	0.9	1.1	1.1	1.1	1.1	1.1	1.0	0.6
17	0.4	0.7	1.0	0.8	1.2	1.5	1.2	1.3	0.9	1.1	0.9	0.8
18	0.4	0.6	0.7	1.3	1.0	1.2	1.0	1.4	0.9	1.1	1.3	0.6
19	0.8	1.1	0.6	1.2	0.9	1.3	1.3	1.3	0.9	1.1	0.6	1.0
20	1.4	1.1	1.0	1.3	0.9	1.2	1.1	0.9	1.2	1.0	0.8	1.1
21	0.8	1.0	0.7	1.2	1.1	1.3	1.5	1.5	1.3	0.9	0.4	0.6
22	1.1	1.7	1.2	1.4	1.0 s	1.3	1.1	1.0 s	0.9	1.0	0.7	0.7
23	1.2	1.0	0.9	1.3	0.6	0.8	1.6	1.4 s	1.3	1.0	0.7	0.9
24	1.2	1.3	1.1	0.8	1.0	1.6	1.3	0.9	1.3	1.0	0.6	1.1
25	1.6	1.0	0.8	1.6 s	1.3	1.8	1.0	1.0	1.1	1.1	0.8	1.2
26	1.1	0.8	1.1	0.7	1.1	1.3	1.1	0.6	0.6	1.1	1.0	1.2
27	1.5	1.3	1.1	1.1	1.2	1.3	0.9	3.2 s	0.9	0.9	1.2	2.0
28	1.0	1.0	1.2	1.1 s	0.8	1.3	1.2	1.0	1.0	1.2	1.0	1.1
29	1.3	1.1	2.2 s	1.0 s	0.7	1.1	1.3	0.7	0.9	0.8	1.5	1.4
30	0.7		1.0 s	1.6	1.2	1.4	1.1	1.0	1.9 s	1.0	0.9	1.4
31	1.3		1.2		1.4		1.3	1.2		1.0		0.9

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1917											
1	0.8	1.3	0.8	1.3	1.4	0.9	1.4	1.1	1.5	1.1	1.3	1.3
2	1.0	0.8	1.0	1.0	1.4 s	1.5	1.6	1.3	2.1	1.5	1.3	1.3
3	...	1.0	1.3	1.2	1.0	1.5	2.0	1.6	1.0	1.3	1.5	1.5
4	2.0 s	0.8	1.2	1.0	1.2	0.7	1.8	2.0	1.8	0.5	1.4	1.3
5	0.7 s	1.0	1.8	1.5	1.1	1.3	1.3	1.7	2.4 s	1.7	1.2	1.0
6	0.9	0.8	1.2	1.3	1.0	1.0	1.0	1.5	1.3	1.0	1.4	0.9
7	0.5	0.8	1.1	1.2	0.5	1.9 s	1.7	1.8	1.4	1.4	1.3	0.9
8	0.5	0.7	1.2	1.2 w	1.1	1.2	1.0	1.6	1.6	1.4	1.1	1.2
9	0.7	1.2	1.0	0.9 w	1.4	1.8	1.3	1.3 s	1.5	1.2	1.0	0.5
10	0.5	0.8	1.7	1.1	1.3	1.1	1.8	1.7 s	1.2	1.1	0.9	0.7
11	1.1	0.8	1.4	1.0	1.1	1.7	2.1	2.4	1.2	1.6	1.4	1.2
12	1.0	1.0	1.6	0.9	1.0	1.3	1.6	2.1	1.2	1.3	1.8 s	1.4
13	1.1 w	1.1	1.4	1.4	1.0	1.4	2.1	1.6 s	0.9	1.2	1.0	1.1
14	0.6 w	1.0	1.2	1.1	1.1	1.4	1.1	1.6 s	1.6	1.5 s	1.2	1.0
15	0.8 w	1.4 ws	1.2	0.9 w	1.4	1.4	1.9	0.9 s	1.3	1.0	1.0	1.5
16	1.0 w	0.5 s	1.3	1.4	...	1.5	1.4	2.0	1.3	1.0	1.4	2.1 s
17	1.2 w	1.0 w	1.2	0.7	1.1	1.2	1.6	1.4	1.1	1.6	1.5	2.0 s
18	1.0 w	1.2 w	1.3	1.1	1.1	1.0	1.3	1.5	1.2	1.1	1.1	2.7 s
19	1.2 w	1.1 w	1.0	1.2	1.3	1.6	1.6	1.5	1.9	1.5	1.6	...
20	0.7 w	0.5 ws	1.1	1.2	1.2	1.5	1.1	1.6	1.9	1.1	1.1	1.9
21	0.8	1.0 w	0.9	1.3	1.1	1.6	1.1	2.4 s	0.9	1.3	0.7	1.0
22	1.0	1.2 w	1.0	1.4	1.0	1.9	1.3	0.9	1.3	1.2	1.2	0.9
23	1.1	1.3	1.2	1.2	1.2	1.2	1.0	1.6	1.9	1.4	0.9	1.0
24	0.7	1.0	1.3	0.9	1.5	1.0 s	1.0	1.2	1.7	1.6	1.5	1.3
25	1.5	2.1 w	1.8	1.0	1.0	1.1	0.6	1.6	1.5	1.6	1.3	1.2
26	1.1	1.3	1.4	1.8	1.0	1.3	1.1	2.0 s	2.1	1.1	1.0	1.2
27	1.3	1.4 s	1.4	1.0	1.5	1.0	1.3	1.8	1.6	1.4	0.9	1.3
28	1.1	1.2 w	1.3	1.3	0.9	0.7	1.0	2.2	2.0	1.9 s	1.4	1.4
29	1.5		1.2	1.4	0.9	1.2	1.3 s	1.8	1.5	1.1 s	1.2	1.9
30	1.2		1.1	1.7	1.2	1.2	2.0	1.1	1.5	0.8	1.0	1.0
31	1.4		1.4		1.4		1.5 s	1.2		0.9		1.2

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1918											
1	1.2	0.8	1.1	1.5	0.6	1.2	1.6	1.2	0.8 s	0.8	0.9	1.1 s
2	0.9	0.6	1.0	1.3	1.4	1.2	1.5	1.6	1.2	1.1	1.1	0.8
3	0.9 w	0.8	1.0	1.4	1.6	1.5	1.0	0.4	1.6	1.1	0.8	1.7
4	0.9	0.6	0.8	1.2	2.2	1.4	1.1	1.1	1.0	1.4	1.3	1.0
5	1.2	1.6	0.8	1.3	1.4	1.0	1.3	1.5	0.7	1.2	0.9	0.7
6	0.8	1.2	1.2	1.0 s	1.2	0.7	1.4	1.2	0.7	0.6	1.0	0.8
7	0.8	0.8	1.1	1.3 s	1.3	0.5	1.2	1.5	1.0	1.4	1.4	1.1
8	0.7	0.7	2.3	1.4	1.6	1.3	1.3	1.0	1.2	1.7 s	1.1	1.6 s
9	0.7	1.0	0.7 s	1.7	2.0	0.8	1.1	1.4	1.0	0.8	1.0	1.1 s
10	1.0	0.8	0.8	1.8	1.7	2.6 s	0.9	1.2	1.2	1.0	0.8	1.0
11	1.0	0.8	0.8	1.6	1.6	1.3	1.3	1.2	1.2	1.4	1.4 s	1.0
12	1.4	0.7 s	1.2	0.9 s	1.1	0.7	0.9	1.1	0.7	1.4	1.0 s	0.7
13	0.8	0.7	1.4	1.1	0.9	0.7	1.1	1.8	1.7	1.5	0.9	0.9
14	0.7	1.4	1.4	1.1	1.3	1.0	1.4	1.5	1.7	1.4	1.0	1.1
15	1.3	1.1	1.7	1.2	1.4	1.2	1.6	0.8 s	1.1	2.4	1.2 s	1.1
16	1.3	1.3	1.6 s	1.1	0.9 s	1.2	1.2	4.0 s	1.4	3.6 s	0.8	0.8
17	1.0	1.3	1.2	1.0	0.8 s	1.0	1.2	1.3	1.3	1.9 s	1.2	1.7
18	1.3	1.2	1.8	0.8	1.2	1.0	1.4	1.3	1.8	1.4	1.0	1.2
19	1.3	1.2	1.1	1.6	0.8	1.1	1.1	0.9	1.5	1.1	1.0	1.8
20	1.8	1.3	1.4	1.0	1.0	1.3	1.2	1.7	0.8	1.4	0.9	1.0
21	1.2	1.4	1.6	1.1	0.9	0.8	1.4	1.4	3.4 s	1.3	1.6	1.0
22	1.1	1.0	1.4	1.0	1.1	1.5	1.3	1.2	1.5	1.4	1.4	1.3
23	0.7	1.0	1.1	1.1	1.2	1.0	1.2	1.8	0.9	1.5	2.1 s	1.2
24	1.3	0.7	1.3	0.9	1.1	1.6	1.1	2.0	1.3	1.2	1.1	1.2
25	1.6	0.9	1.3	1.1	1.3	0.7	1.7	1.5 s	1.3	1.2	0.7	2.1 s
26	1.4	1.0	1.2	0.4	1.1	1.4	1.5	0.8	1.1	1.0	1.0	1.4 s
27	1.2	1.0	1.6	1.1	1.1	0.6	1.2	1.7	1.2	1.2	0.9	0.7 w
28	1.3	1.6	1.1	1.4	1.1	1.6	1.1 s	1.5	1.5	1.1	0.7	1.0
29	1.2		1.2	1.0	1.3	1.2	1.3	1.5	1.8	1.1	0.7 s	0.8
30	1.4 s		1.3	1.8	1.0	1.2	0.6 w	1.4	1.0	1.1	0.7	1.1
31	0.9 s		1.3		1.1		0.9 w	1.4		2.4		1.3

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1919											
1	0.7	0.6	1.4	1.4	1.4	0.8	1.2	1.0	1.2	3.2 ws	1.1	1.3
2	1.1	1.1	1.1 s	1.4	2.0 s	1.3	1.5	1.3	1.2 s	0.2	1.1	1.1
3	0.6	1.2	0.6	1.3	2.0 s	1.0	1.6	1.0	1.5	2.1 s	1.3	1.1
4	1.7 s	1.3	1.0	2.0	1.3	1.3	0.7	1.1	1.3	1.6 s	2.0 s	0.9
5	0.8 s	1.6	1.0	1.1	1.0	1.8	0.9	1.2	1.3	0.5 s	0.9	1.2
6	0.8	1.4	1.1	1.3	1.1	1.0	1.0	1.0	1.8	1.4 s	0.8	1.2
7	0.8	1.8	0.9	0.7	1.4	1.1	0.8	1.5	1.7	1.1	0.8	1.0
8	0.7	1.5	1.1	0.9	1.6	1.3	1.1	1.3	0.9	1.1 w	0.8	1.1
9	0.9	1.7	1.1	0.9	1.1	2.4	1.0	1.0	0.5	1.1 w	1.0	1.1
10	1.1	1.6	1.3	0.9	1.5	0.9	1.5	1.1	1.3	1.5 w	0.7	1.3
11	1.5	1.3	1.3	1.0	1.0	0.9	1.1	4.4 s	1.4	1.3 w	1.2	1.5
12	0.9	1.3	1.6	0.8	1.6	0.8	1.1	4.7 s	1.5	1.6 w	1.5	1.4
13	2.3	1.5	1.3	1.0	1.2 s	1.0	1.2	1.3	1.3	1.3 w	0.9	1.0
14	2.5	0.6	1.4	1.1	1.2	1.1	1.7	1.5	1.5	1.3	0.8	2.0 s
15	1.2	0.8	1.3	1.1	1.2	0.9	0.9	1.5	1.1	1.2	0.7	0.9 ws
16	1.8	0.8	1.4	1.1	1.3	1.1	1.1	0.7	1.0	1.4	1.2	0.9
17	0.7	1.2	1.1	1.2 s	1.4	1.3	1.2	0.8	1.6	1.0	0.8	0.5
18	0.8	1.3	1.0	0.8	1.0	1.2	1.1	1.3	1.7	0.7	1.2	1.1
19	0.8	1.5	1.5	0.8	1.2	0.9	0.9	1.7 s	1.9 s	1.1	1.0	0.8
20	0.9	1.3	1.2 s	0.5	1.1	1.2	0.6	1.0	1.1 s	0.8	1.0	1.1
21	1.3	1.5 s	0.9 s	0.8	1.2 s	2.4	0.8	1.0	1.0	0.9	0.9	1.2
22	1.2	0.9	0.8 s	0.8	2.7	1.3	1.5	1.2	1.0	1.6	1.7	0.7
23	0.8	1.0	1.0	1.0	0.8	0.9	1.3 s	1.0	1.4	1.6	1.0	1.1
24	1.3	0.6	0.9	0.8	2.3 s	1.2	1.2	0.9	1.8 s	1.1	0.9	1.6
25	0.8	0.8	1.1	1.2	0.8	1.5	0.7	0.8	1.9	0.9	1.1	1.1
26	0.9	0.9	0.7	1.0	1.2	1.1	0.6	1.6	1.1	1.2	1.1	1.2
27	1.1	1.0	1.4	1.1	1.1	1.7	1.1	1.7	1.0	1.6	0.9	1.2
28	0.1 w	2.8 s	1.5	1.2	0.8	2.0	1.3	0.8	1.6	1.2	0.9	1.7
29	0.7 w		1.1	1.0	0.8	1.7	1.1	1.1	1.4	1.1	1.1	0.9
30	1.2		1.0	0.9	1.0	1.0	1.0	1.4	1.5	1.1	1.0	1.1
31	0.9 s		1.2		1.4		1.4	0.9		1.1		

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1920											
1	1.2	0.8	1.0	1.1	0.6	1.3	1.3	0.7	1.4	0.8	1.1	0.9
2	1.1	0.6	0.9	1.1	1.3	1.4	1.3	1.0	0.6	1.1	1.2	1.3
3	0.9	0.5	0.8	0.9	1.8	0.7	1.2 w	0.8	1.5 s	1.3	0.9	0.9
4	0.8	1.5	0.9 s	1.1	1.2	1.1	1.1	1.0	0.4	1.3	1.1	1.2 s
5	0.9	1.3	1.2 s	1.2	1.1	0.8	1.1	1.2	0.5	0.9	1.1	2.0
6	0.7	1.7	1.3	1.0	1.3	1.3	1.1	0.8	0.8	1.2	0.8	0.8
7	1.3	1.7	1.2	1.3	1.1	1.4	1.5 w	0.8	1.0	1.1	0.6	0.7
8	1.4	1.0	1.0	1.0	1.1	1.2	1.0 w	1.1 w	1.0	0.9	0.5	0.4
9	1.5	1.1 w	1.3	1.0	1.4	1.1	0.9 w	0.8	0.9	0.6	1.0	1.3
10	1.6	1.2	1.0	1.2	1.0	1.6 s	1.6 w	0.7 w	0.9	1.4	1.1	0.7
11	1.0	1.0	0.9	1.0	0.8	0.5	0.9	1.1 w	1.0	0.6 s	0.8	0.9
12	1.4	0.4	1.3	0.8	0.5	0.8	1.4	1.0	0.8	0.9	0.7	0.8
13	0.9	0.8	1.1	1.0	1.8 s	0.7	0.9	0.5	0.7	1.2	0.7	1.2
14	0.4	1.4	1.3 s	1.1	0.9	1.2	0.9	1.0	1.0	1.1	0.8	1.1
15	0.6	1.2	1.1	1.8 s	1.4	0.8	1.5	0.8 w	1.0	1.2	1.0	1.3
16	0.7	1.2 s	1.2	0.7	0.7	0.8	0.4	0.9 w	0.8	0.9	0.8	0.6
17	0.7	1.2	2.2	1.1	1.1	1.0	1.1	1.1	1.2	1.2	1.4	0.7
18	0.9	1.0	1.1	0.3	0.8	1.0	1.3	1.3	0.8	0.8	0.8	1.3
19	1.1	1.1	1.2	0.7	1.0	1.1	1.1	0.3	0.6	1.0	0.6	0.7
20	0.9	1.3	1.2	1.1	0.8	0.8	1.0	0.9	0.9	1.3	0.6	0.4
21	1.6	1.4	1.7	0.7	0.9	1.0	1.1	1.0	0.8	1.3	0.6	1.0
22	1.2	1.5	2.2 ws	1.1	1.1	0.8	1.7	1.2 w	2.0 s	1.0	0.4	0.5
23	1.6	1.3	1.0 vs	1.0	1.1	0.7	1.3	1.2 w	1.1	1.2	1.0	0.6
24	1.5	1.5 s	1.0 s	0.9	1.0	1.5	1.0	0.9	1.0	1.3	0.8	1.5
25	1.8	0.5	0.5	1.0	0.7	1.3	0.6	1.1 w	1.2	1.2	1.1	0.7
26	1.6	1.0	1.2	0.8	0.7	1.3	0.9	0.8 w	1.2	1.0	0.9 s	2.4 s
27	1.3	1.2	1.6	0.9	1.5	0.8	0.9	0.9 w	1.2	0.8	1.2	0.9
28	1.7	0.8	0.9	1.0	1.7	1.0	0.9	1.1 w	0.7 s	0.6	0.9	1.2
29	1.1	0.9	1.2	1.0	0.9	1.0	0.7	0.8	0.4 s	1.3	0.8	1.1
30	1.8		1.0	0.5	1.2	0.8	1.0	1.5	0.9	0.9	0.9	1.4
31	1.2		1.3		1.0		0.6	1.0		1.0		1.1

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Manila data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1921						
1	1.5	0.7	1.1	1.2	1.2	1.1	0.9	0.8	0.7	0.5	0.6	1.2
2	1.0	0.9	0.8	1.2	0.9	1.1	0.9	0.9	1.6 s	0.8	0.7	0.9
3	0.4	0.3	1.0	1.1	1.3	1.0	1.3	1.4	0.4	1.2	0.9	0.7
4	0.9	0.8	0.7	0.8	0.5	1.3	0.6	1.2	1.0	1.0	0.7	1.1
5	0.9	1.0	1.0	0.9	1.1	0.9	0.9	0.9	0.7	0.8	0.7	0.9
6	0.9	0.9	1.1	1.0	0.9	1.0	1.1	1.0	0.9	0.6	0.9	1.0
7	0.7	0.6	0.8	1.1	0.9	1.2	1.4	0.8	1.2	0.9	0.3	1.1
8	0.9	0.9	1.0	1.3	1.5	0.6	0.8	1.0	0.8	1.6 s	0.9	1.3
9	1.1	1.1	1.0	1.2	1.2	0.7	0.7	1.0	0.8 w	0.7	0.7	1.1
10	0.8	1.0	0.7	0.6	1.5	0.7	0.8	0.8	1.3 w	1.1	1.2	1.0
11	0.7	0.8	1.0	0.8	0.8	0.7	0.7	1.0	1.3 w	1.1	0.8	0.6
12	1.1	1.0	1.1	1.1	1.9 s	1.2	1.3	0.5	1.6 w	0.7	0.8	2.4
13	1.1	1.4	1.1	1.5 s	0.9 s	0.9	1.7	0.8	1.0	1.1	0.6 v	1.0
14	0.7	0.5	1.1	1.3	1.8 s	1.2	0.6	0.8	0.6	1.1	0.2 v	0.7 s
15	0.7	0.7	1.7	0.9	...	0.7	0.4	1.1	0.7	1.0	0.7	0.9
16	0.6	1.1	1.3	1.1	...	0.8	1.0	0.6	1.2	1.0	1.4 s	1.1
17	1.1	0.9	1.0	0.7	1.3	1.6	0.5	0.9	1.0	0.8	1.1 s	1.5
18	0.7	0.8	0.9	0.8	0.9 s	1.0	0.6	0.9	0.7	0.8	0.6	1.0
19	0.9	0.8	0.8	1.1	2.1 s	0.9	0.5	0.5	1.1	0.7	0.6	0.9
20	0.8	1.0	0.8	0.9	0.2	1.0	0.9	1.0	0.8	0.9	0.8	1.2
21	1.1	0.8	1.3	1.0	1.1	0.4	0.7	1.0	0.8	0.9	0.8	1.3
22	0.9	1.0	1.5	0.6	0.7	1.1	0.8	1.2	0.6	1.0	0.5	1.0
23	0.6	1.0	0.7	1.1	0.3	1.0	0.9	0.8	0.7	0.9	0.9	0.5
24	1.0	0.9	0.8	0.9	1.1	0.7	0.7	1.2	0.6	0.9	0.8	0.7
25	0.6	1.0	0.8	1.0	0.9	1.0	0.6	1.1	0.9	0.8	0.8	0.9
26	0.6	1.2	1.2	0.7	0.9	1.4	0.8	1.7	1.0	0.8	0.8	0.9
27	1.2	0.9	1.0	0.9	0.6	1.1	0.9	0.7	1.2	0.9	0.7	0.6
28	1.0	1.3	1.1	1.0	1.5	1.0	1.2	1.0	1.1	0.7	0.5	2.1 s
29	0.7		0.9	2.1	1.0	0.8	1.3	1.1	0.9 s	0.6	0.8	1.1
30	0.8		1.0	0.8	0.9	0.9	1.1	1.0	0.7	1.0	0.9	0.8
31	0.8		0.8		1.0		0.7	0.4		1.1		0.5

Day	Compiled from Manila data for month				Compiled from Huancayo data for month							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1922						
1	0.8	1.0	0.9	0.8	1.5	1.0	1.5	0.9	0.4	0.6	1.1	0.6
2	0.7	1.1	0.7	1.1	1.6	1.3	0.6	1.0	0.6	0.9	0.9	0.3
3	0.9	1.3	1.0	1.0	1.1	0.9	0.9	0.5	0.4	1.0	1.3	0.7
4	0.7	0.7	1.3	1.0	0.8	0.9	0.8	1.1	0.6	1.2	1.5	1.0
5	0.8	0.6	1.7 s	0.9	0.8	0.9	0.5	1.1	0.7	0.9 s	1.4	1.3
6	0.9	1.0	0.9	0.9	0.9	1.5	0.9	0.9	0.7	1.0	1.1	1.0
7	1.1 s	0.7	1.1	1.1	1.1	0.9	1.1	0.9	0.8	0.9	1.0	0.9
8	0.6	1.0	1.4	1.2	0.6	1.2	1.1	1.2	0.7 s	1.0	1.2	1.3
9	0.8	0.7	1.1	0.6	0.9	1.0	1.1	1.3	0.7	1.1	1.3	1.2
10	0.8	0.7	1.6	0.8	1.0	1.0	1.3	0.9	0.6	1.2	1.8	1.0
11	0.7	0.8	1.1	0.6	1.1	1.1	0.9	0.5 s	0.8	1.0	0.7	0.8
12	1.1	1.1	1.2	0.9	1.2	0.8	1.3	0.9	0.8	0.6	1.0	1.0
13	0.8	0.8	1.5 s	0.8	1.4	1.1	1.2	1.3	0.9	0.8	0.9	0.7
14	0.9	0.6	0.7 s	0.9	1.1	0.8	0.7	1.0	0.8 s	0.8	1.1	0.9
15	1.0	1.3	0.5	0.9	1.0	0.7	0.7	0.8	0.9	1.0	0.5	0.6
16	1.3	1.4 s	0.9	0.8	1.6	1.6	0.8	0.7	0.8	0.9	1.1	0.7
17	0.9	0.8	1.2	0.8	0.8	1.0	0.6	0.8	0.8	0.6	0.8	0.8
18	1.0	0.6	0.8	1.1	0.7	1.1	0.8	0.7	0.8	0.6	0.9	0.9
19	1.0	0.6	1.0	1.0	1.0	1.1	0.6	0.6	1.0	0.7	1.1	1.1
20	0.7	0.6	0.7	0.9	0.8	0.6	0.8	0.5	1.0	0.9	0.7	0.8
21	1.0	1.0	0.8	0.8	0.8	1.1	0.8	1.1	0.9	0.9	1.0	0.9
22	0.6	0.3	1.0	1.3 s	1.0	1.4	0.7	0.8	1.3	1.2	0.8	1.0
23	0.9	0.8	0.9	1.0	0.7	0.9	1.2	1.1	1.3	1.3	1.1	0.5
24	0.9 s	0.8	1.1	0.7	0.6	1.2	0.8	1.4	1.3	0.7	1.1	0.8
25	1.2 s	0.7	2.1	1.0	0.8	0.8	0.9	1.2	1.1	1.0	0.8	1.1
26	0.4	1.4	0.8	0.5	0.5	1.2	1.2 s	0.6	1.0	0.7	1.0	0.4
27	0.6	1.0	0.8	1.0	0.9	0.7	1.2	0.8	1.3	0.8	1.1	0.4
28	1.0	0.9	1.0	0.5	1.3	1.0	1.5 s	0.8	0.9	1.2	0.7	0.7
29	0.8		1.2	1.1	0.7	1.2	1.5	0.8	0.9	0.8	0.7	0.7
30	1.0		1.2	0.7	0.6	1.0	1.7	0.8	0.6	0.7	1.0	0.5
31	1.3		0.7		0.8		0.7	0.9		0.4 s		0.7

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1923											
1	0.8	0.8	0.5	1.3	1.3	1.0	0.8	0.6	0.6	1.2	1.7	0.8
2	0.9	0.9	0.8	1.4	1.1	0.9	0.8	1.0	0.6	1.1	1.1	0.7
3	0.8	...	1.1	1.4	1.0	0.4	1.2	1.5	0.8	0.9	0.4	0.3
4	1.2	1.6	0.9	1.4	1.0	0.7	0.9	1.0	0.8	1.1	0.9	0.7
5	1.0	1.2	1.3	1.0	0.8	0.9	1.1	1.0	0.5	1.0	1.1	0.4
6	0.9	1.1	1.2	1.3	1.0	0.6	0.9	1.2	0.5	1.2	1.5	0.9
7	1.0	0.7	0.8	0.7	1.3	0.6	1.2	1.2	0.5	0.9	1.4	0.5
8	0.8	0.9	0.9	1.1	1.0	0.6	0.9	0.8	0.5	0.6	1.0	0.7
9	1.0	0.8	0.9	0.9	0.8	0.4	1.0	0.8	0.9	0.8	1.0	0.8
10	1.1	0.6	0.8	1.0	0.9	0.7	1.5	0.7	1.0	1.0	1.2	0.8
11	0.5	0.4	0.7	0.9	0.9	0.6	1.2	0.8	1.3	0.6	1.3	1.1
12	1.2	0.3	0.7	1.0	0.8	0.9	0.9	1.0	1.1	1.3	1.8	0.9
13	0.8	0.6	0.9	0.9	1.1	1.0 s	1.3	1.4	0.8	1.1	1.4	1.0
14	0.9	1.0	1.0	1.0	0.8	0.8	1.4	0.8	1.2	1.3	1.1	0.9
15	0.8	0.5	1.3	1.0	1.2	1.2	1.4	1.1	1.0	0.7 s	0.7	0.7
16	0.9	1.4	1.0	1.1	1.1	1.0	0.6	1.1	1.0	0.3 s	0.7	0.7
17	1.1	1.3	1.1	1.1	1.0 s	0.9	0.9	0.6	1.1	0.5 s	0.3	1.0
18	1.0	1.1	1.0	1.2	0.7	0.9	1.1	1.1	0.9	0.8	1.0	0.8
19	1.5	0.9	1.1	1.3	0.7	1.4	1.0	1.5	0.8	1.2	0.6	0.9
20	1.7	0.9	1.3	1.1	1.0	1.0	1.0	0.5	0.5	1.0	0.9	0.7
21	1.5	1.5	1.1	0.7	0.7	0.9	0.8	1.0	0.6	0.9	0.9	0.8
22	1.5	1.1	0.8	1.0	0.8	0.6	1.0	0.8	0.8	0.7	0.8 w	0.6
23	1.2	1.2	0.8	1.0	0.8	0.7	0.7	0.8	1.1	0.4	1.1	1.1
24	1.4	0.9	1.6 s	0.9	0.5	0.7	0.8	1.2	1.1	1.1	0.9 w	0.5
25	1.2	1.0 s	0.7 s	0.9	0.6	1.0	1.0	1.1	1.1	1.3	1.1 w	1.0
26	1.2	0.7 s	0.7	0.9	0.4	0.6	1.2	0.5	1.6 s	0.8	1.0	1.4 s
27	0.9	0.6 s	0.9	0.7	0.5	0.9	1.5	1.4	0.7 s	0.8	1.0	0.6
28	0.7	0.9	1.1	0.5	0.5	1.4	1.2	1.2	1.1	0.7	0.7	1.3
29	0.5		1.1	0.5	0.7	1.4	1.4	1.2	1.5	0.7	1.0	1.0
30	0.9		1.1	0.9	0.3	0.6	1.2	1.4	1.2	0.9	0.9	1.1
31	0.9		1.2		0.9		1.1	1.0		1.2		1.2

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1924											
1	1.1	0.7	0.5 w	0.8	0.8	1.0	0.7	0.6	1.1	1.0	2.2	1.2
2	0.8	0.9	0.6 w	0.6	1.1	1.5	1.2	1.3	1.0	1.0	1.4	0.7
3	0.9	1.3	0.8	0.9	1.3	1.1	0.7	1.0	0.6	1.1	1.0	1.0
4	0.5	1.1	0.7	1.1	1.2	0.9	1.3	1.1	0.8	1.0	0.5	1.0
5	0.5	1.2 s	0.7	1.0	1.0	1.6	1.2	1.2	1.0	1.0	0.7	0.9
6	0.8	0.5 w	0.8	1.2	0.9	1.0	1.2	0.7	0.8	0.8	1.2	1.0
7	0.9	1.4	0.9	0.9	0.7	1.0	1.2	0.9	1.2 s	1.0	1.2	1.0
8	0.8	1.4	1.0	0.8	1.2	1.1	0.9	0.5	0.6 s	1.0	1.0	0.6
9	1.2	1.3	1.0	1.0	1.0	0.7 s	1.2 s	1.1	0.8	0.8	0.9	0.8
10	0.9 s	1.3	0.8	0.8	0.8	2.7 vs	0.8	0.8	0.7	0.8	1.4	0.8
11	1.2	1.0	0.9	0.8	1.0	1.1 s	1.2	1.0	0.7	1.1	0.8	1.1
12	1.1	0.9	0.7	0.7	0.7	0.6	1.2	0.9	1.1	1.1	0.9	1.3
13	0.6	0.9	0.9	0.8	0.7	1.4	1.1	0.6	1.0	1.2	0.7	1.3
14	0.8	0.7	0.9	0.9	0.7	0.3 w	1.0	1.4	0.6	1.5	1.2	1.3
15	1.1	0.6	0.7	0.8	1.0	0.8	1.1	0.8	0.8	1.1	1.4	1.6
16	1.0	0.8	0.9	0.7	1.0	1.0	1.0	0.8	0.9	1.1	1.4	1.5
17	1.0	0.3	0.7	0.9	0.9	1.0	0.7	1.1 w	1.2	1.1	1.2	1.2
18	0.5	0.5	0.8	0.9	0.6	1.7 s	0.7	0.6 w	1.3	0.6	0.9	1.4
19	0.7	0.6	1.1	0.9	0.8	0.6 s	0.4	1.4	1.0	0.9	1.3 s	1.1
20	0.7	0.2 s	1.0	1.2	0.9	1.0	1.5	0.7 v	0.6	1.0	1.4	1.6
21	1.2	0.8	0.8	1.2	1.3 s	1.1	0.8	0.7 w	0.6	1.2	1.2	1.0
22	0.8	0.7	1.0	1.3	1.0 s	0.8	0.8	0.9	0.9	0.9	0.6	0.4
23	1.1 s	0.9 w	1.1	1.4	0.7 s	0.4	0.8	0.6	1.4	0.7 s	1.0	0.7
24	1.2	1.0	0.9	1.0	0.8	0.9	0.9	1.0	1.1	1.0 s	1.3 s	0.7
25	1.4	1.0	1.1	0.3	0.9	0.6	0.6	0.9	1.2	0.6	1.2	0.9
26	1.1	0.8	0.8	0.5	0.8	0.9	0.7	0.6	1.2	0.9	1.3	0.7
27	1.1	0.6	0.9	0.6	1.0	0.8	0.9	1.2	1.2	1.4	0.5	1.3
28	1.2	0.9	0.7	0.5	0.5	0.8	0.8	0.7	1.1	0.9	1.3	1.6
29	2.2 s	0.7	1.1	0.8	0.8	1.1	0.6	1.0	1.4	1.1	1.2	1.7
30	0.7 s		1.1 s	0.5	0.9	1.0	1.0	1.0	1.1	0.8	1.3	1.8
31	0.9		1.0		0.6		1.1	1.0		1.3		1.6

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1925						
1	1.5	0.6	0.2	1.3	0.8	1.1	1.1	1.0	1.7 s	1.1	1.7	1.5
2	1.6	0.8	0.7	1.0	0.5 w	0.7	1.1	0.6	1.0 s	1.1 w	1.9	1.3
3	0.6	0.6	0.9	0.5	1.1	0.9	0.5 v	1.2	1.4	1.4	1.4	1.4
4	0.8	0.3	1.0	0.7	1.0 s	1.2	0.9	0.6	1.1	1.3	1.5	1.3
5	0.9	0.7	0.8	0.8	1.0	0.9	1.2	1.2	1.2	1.6	1.9	1.3
6	0.7	0.8	0.7	0.9	0.9	1.2	1.2	1.3	1.2	1.1	1.6 w	1.1
7	1.0	0.6	0.7	0.9	1.1	1.3	1.4	0.8	0.8	0.8	2.2 w	0.9
8	0.9	1.0	0.8	1.3	1.2	1.2	0.9	0.9	1.0	1.6	2.9 w	1.0
9	0.9	0.9 s	1.2 s	1.1	1.3	1.4	1.2	1.1	0.8	1.3 s	1.3 s	0.9
10	1.1	1.1	1.1	1.0	1.2	1.2	1.6	1.2	0.9	1.3	1.3 s	1.4
11	1.3	1.3	1.2	1.1	1.3	1.4	1.6	0.7	1.0	1.3	1.3	1.3
12	1.3	1.2	1.1	1.1	1.4	1.5	1.5	0.8	0.6	1.6 s	1.0	1.4
13	1.6	1.4	1.3	1.4	1.1	0.8 s	1.4	1.2	0.9	1.5	1.2	1.1
14	1.3	1.0	1.4	1.1	0.9	1.2	0.7 v	0.9	1.5 s	1.2	1.6	1.9
15	1.4	1.0	1.2	1.1	0.9	1.4	1.0	1.1	0.8 s	1.4	1.6	1.5
16	1.0 ws	1.2	1.2	1.0	0.4	1.4	0.7	1.4	1.2	1.0	1.7	1.0 w
17	1.1	0.5	1.0	0.8	0.7	0.9	0.8	0.9	0.9	1.7 w	1.2	1.2 w
18	1.0	0.7	0.8	1.0	1.0	1.2	1.2	0.6	1.2	1.6 w	1.7	1.3
19	1.1 s	0.7	0.8	1.0	0.8	1.2	0.7	0.7	1.4	2.4 w	1.9	2.1
20	1.1	0.6	0.5	1.1 v	0.8 v	1.0	1.0	0.9 w	1.4	1.9 w	1.7	1.7
21	0.8	1.2	0.6	0.7	0.9	1.3	1.0	0.8	1.2 s	2.3 ws	1.2	1.6
22	1.0	1.0	0.8	0.9	0.8	1.3	1.2	1.7 s	1.5	1.7 ws	1.2	1.5
23	0.7	1.0	0.9	1.1	1.2	0.8	1.1	0.8 s	1.5	2.1 ws	1.0	1.4
24	0.8	1.5	1.3	1.1	0.8	1.7 s	1.2	0.7	1.3 s	1.2 s	1.7	1.3
25	0.6	1.3	1.0	1.0	0.8	0.6	1.6	1.0	1.2	1.6	1.2	0.8
26	1.2	0.9	1.3	0.8	0.8	1.6	1.1 s	1.6 w	1.6	1.2	0.7	1.0
27	1.4	0.6	1.2	1.1	0.6	1.2	1.3	0.8	1.6	0.9	1.1	2.3 s
28	1.0	0.8	1.1	1.1	0.9	1.4	0.9	0.8	1.5	0.7	1.2	1.6 s
29	0.6		1.2	1.0	1.1	1.5 v	0.9	0.9	1.1	0.8	1.2	1.5
30	0.6		0.7	0.6	1.1	1.0 v	1.2	1.5 w	1.5	1.2	1.5	1.8
31	0.8		0.9		0.4		1.2	1.8		1.4		1.8

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1926						
1	1.0	1.7	1.5	1.4	1.1	3.5 s	1.4	1.2	0.8	0.8	1.4	0.5
2	1.9	1.8	1.1	1.6	1.4	1.0 s	0.8	1.1	0.7	1.1	1.7	0.8
3	1.1	1.8	2.0	1.4	1.7	1.2	1.2	1.3	0.7	0.8	1.6	0.8
4	1.6	1.5	1.6	1.3	1.5 s	1.4	0.5	1.1	0.7	1.2	1.2	1.4 w
5	1.6	1.4	2.0	1.4	1.4	1.0	1.2	1.1	1.1	1.3	1.5	1.3
6	1.3	1.2	1.0	1.1	1.4	1.1	1.1	1.1	1.3	1.4	1.5	1.1
7	1.8	0.8	1.8	1.1	1.0	1.4	1.3	1.8	1.2	1.3	1.5	1.2
8	0.9	0.8	1.1	1.0	1.5	1.3	1.1	1.5	1.0 s	1.3	1.8	1.1
9	0.9	1.0	2.2	0.9	1.9	1.4	1.2	1.0	1.3 s	1.8	0.9	1.0
10	0.6	1.3	1.2	1.2	1.0 s	1.2	0.8	1.2 w	1.2	1.6	1.4	1.2
11	0.8	1.5	1.2	1.0	1.6	1.3	0.7	1.4	1.0	1.1	1.6	0.4
12	1.2	1.5	1.3	1.1	1.6	0.9	1.6	2.0	1.0	1.6	1.5	1.1
13	1.2	1.4	1.4	1.4	1.8	1.4	1.2	1.3 s	0.9	1.6	1.1	0.8
14	1.5	2.0	0.9	2.1 ws	1.4	0.9	0.9	1.4	1.3 s	2.0 s	1.6	0.8
15	1.8	1.7	1.6	... s	2.0	0.9	0.8	1.4	1.8 s	2.3 s	1.1	1.4
16	1.8	1.5	2.0	1.6 s	1.8	1.0	1.0	1.2	1.0	1.3 s	1.2	1.1
17	1.7	2.3	1.6 s	1.3	1.5	1.1	1.2	0.7	1.2	1.4	0.5	1.1
18	1.8	1.5 s	1.0	1.0	1.3	1.5	1.2	0.6	1.5	0.9	0.9	1.5
19	1.1	1.5	1.3	1.1	1.5	0.9	0.5	1.1	1.8	1.5	1.0	1.4
20	1.8	1.4	1.3	1.2	1.2	1.5	0.8	1.5	1.9 s	1.1	1.6	1.8
21	1.9	1.3	1.2	1.3	1.3	1.6	1.0	1.1	0.9 s	0.7	1.6	1.5
22	2.4 ws	1.6	0.9	0.6	1.4	0.6	1.3	1.7	1.8	1.1	1.9	1.4
23	1.7 s	2.6 s	0.7	0.9	1.1	1.9	1.4	1.1	1.5	1.2	1.7	1.0 s
24	0.9	0.9 s	1.0	0.9	1.3	1.1	1.9	1.3	1.5	1.1	1.2	1.3
25	0.8	1.6 s	1.0	0.8	1.0	1.4	0.9	1.3	1.3	1.3 s	0.7	1.6
26	4.7 ws	1.1	1.0	1.3	1.3	1.0	1.3	1.1	1.7 w	0.7	1.4	1.3
27	1.0 s	1.7	1.4	0.8	0.8	1.0	2.4	1.3	1.2 w	0.8	1.2	1.5
28	1.3	1.1	1.3	0.9	1.0	1.5	1.6	1.1	1.0	0.7	1.9 s	1.2
29	1.5		1.1	0.8	1.1	1.4	1.1	1.7	0.9	0.5	1.3 s	1.0
30	1.7		1.5	0.8	0.9	1.1	1.6	1.3	1.1	0.7	1.4	1.1
31	1.7		1.3		1.0		1.3 s	1.2		1.0		1.1

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1927											
1	1.1	0.8	0.8	1.2	1.4	2.1	1.3	1.2 w	0.8	1.3	1.6	1.2
2	1.2	1.2	0.9	1.2	1.1	1.0	1.8	1.0	0.8	1.4	1.2	1.1
3	1.6	2.1	1.9	1.1	1.7	1.5	0.7	1.4	1.0	1.0	1.3	1.1
4	1.4	1.6	2.2	1.4	1.8	1.4	1.4	1.2	0.6	1.5	1.2	0.7
5	1.1	1.7	1.8	1.8	1.3 s	1.2	1.3	1.3	1.4 w	1.9	1.4	0.8
6	1.2	2.4	1.3	1.7	1.3	1.6	1.4	1.1	1.4 w	1.4	0.7	0.9
7	2.0	2.2	1.4	1.4	0.6 s	1.4	0.9	1.3	1.0	1.7	1.2	1.0
8	1.3	2.1	1.4	1.1	1.3	1.5	0.7	0.9	1.0	1.1	1.3	1.6
9	0.7 w	2.7 s	1.5	0.8	1.4	1.0	1.0	1.1	1.1	1.5	1.7	1.3
10	0.7 w	1.7	1.4	0.9	0.7	1.5	0.9 w	1.0	1.2 s	1.7 s	1.4	1.0
11	1.5	1.1	1.4	1.0 s	1.4	1.2	0.9 w	1.0	1.0	1.7	1.9	1.6
12	1.7	1.0	1.3	1.3	1.4	1.1	1.2	1.0	1.1	0.5 s	2.4	1.6
13	1.3	0.9	1.0	1.2	1.3	1.1	1.3	1.2	1.5	1.8 s	1.1	1.8 s
14	1.8	1.5	1.0	0.7	1.3	1.1	1.1	1.0	1.5	1.9 s	1.0	1.6
15	0.4	1.3	1.3	1.1	1.4	1.5	0.9	1.0	1.4	2.0	1.5	1.5
16	1.2	1.8	1.3 s	1.4	1.5 w	1.4	1.3	0.8	1.2	1.9	1.5	1.2
17	0.5	1.6	2.0 s	1.5	1.3 w	1.2	1.0 w	1.6	1.1	1.5	1.6	1.1
18	1.6	1.2	1.4	1.3	1.2	1.4	1.4 w	1.0	1.0	1.4	2.2	0.8
19	1.2	1.4	1.3	1.4	1.8	0.7	1.6	1.0	1.0	0.9	1.1	1.1
20	1.8	1.2	1.2	1.4	1.0	1.5	0.8	2.0 s	1.3	1.1	1.0	1.1
21	0.9 w	1.4	1.4	1.1	1.3	1.1	1.2 s	1.1 s	1.2	1.0	1.0	1.5
22	1.5 w	1.4	1.5 w	1.3	1.2	0.8	0.7 s	1.4	1.3 v	0.7 s	1.2	1.3
23	1.8	1.6	2.0	1.5	1.3	0.9	1.4	1.3	1.1 v	1.2	0.9	1.5
24	1.4	1.1	1.5	0.8	1.1	1.3	1.4	1.2	1.3	1.9	1.5	1.3
25	1.3	1.4	1.3	1.1 w	0.8	1.1	0.9	1.1	1.2	1.5	1.0	1.5
26	0.6	1.5	0.6	1.1 w	0.9 w	1.4	1.2	1.3	1.4	1.2	1.4	1.1
27	1.0	1.3	1.4 s	1.0	1.1	1.1	1.5	1.8	1.7	1.1	1.1	2.2
28	1.2	1.3	0.8 s	1.3	1.2	1.4	1.2	1.2	1.2	0.6	1.0	2.7
29	1.1		1.3	1.4	0.8	1.6	1.4	2.3 s	1.0	1.2	1.6	1.5
30	1.1 w		1.2	1.5 w	1.2	1.5	1.4	0.8 s	1.3	1.4	1.5	1.6
31	0.8		1.6		1.1		1.1 v	1.5		1.4		1.7

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1928											
1	1.7	1.4	0.7	0.9	1.5	2.4	1.9	0.5 w	1.1	2.0	2.4	1.6
2	1.4	1.3	0.9	0.8	1.7	2.1	1.3	1.2	1.3	2.1	1.9	1.7
3	1.2	0.9	1.2	1.1	1.4	2.1	1.3	1.8	1.5 s	1.9	1.8 s	1.2
4	0.7	0.9	1.3	1.7	1.7	1.3	2.2	1.8	1.5	2.0	1.0	1.5
5	1.5	1.0	1.4	1.6	1.9	1.6	1.3	1.5 s	1.4	1.5	1.0	1.7
6	1.5	1.1	1.2	1.4	1.1	1.7	1.3	2.0	1.2	1.6	1.0	1.1 s
7	1.3	1.5	1.3	1.6	1.6	1.6	2.3 s	1.1	1.6 s	1.3	1.6	1.0
8	1.2	1.4	1.7	1.2	1.5	1.4	2.3 s	1.4	1.2 s	1.1	1.7	1.1
9	1.4	1.3	1.6	1.5	1.9	1.1	1.0	1.6	1.0	1.1	1.2	1.4
10	1.6	1.3	1.8	1.3	2.1	1.5	1.4	1.5	0.9	2.1	1.1	1.5
11	1.4	1.5	2.1 s	1.3	1.2	1.4	0.6	1.3	1.0	1.4	1.5	1.6
12	1.1	1.4	1.3	1.3	1.1	1.4	1.2	1.5	1.2	1.4	2.0	1.8
13	1.2	1.3	1.7	0.9	1.5	1.5	1.3	1.0	1.6	1.5	1.9 s	1.4
14	0.8	1.1	1.5	1.3	1.3	1.0	0.8	1.3	1.3	1.1	1.7	1.7
15	1.3	1.3	1.5	1.7	0.9	1.7	1.0	1.5	1.4	1.4	2.3	1.7
16	1.0	1.2	0.8	1.7	1.5	1.3	1.0	1.2	1.3	1.4	1.5	1.5
17	0.8	1.0	0.9	1.0	1.0	1.5	1.0	1.0	1.2	1.6	1.7	1.4
18	0.6	1.6	1.2	1.2	1.1	1.6	1.8	1.6	2.4 s	2.4 s	1.7	1.7
19	1.0	1.3	1.2	1.6	1.2	1.5	1.9	1.0	1.5	1.8	1.8	1.6
20	0.5	1.5	1.5	1.4	1.3	2.3	2.1	1.2	1.4	1.7	1.1	1.3
21	1.3	1.1	1.5	1.6	1.2	1.5	2.6	1.5	1.6	1.2	1.1	0.8 v
22	1.2	1.2	1.7	1.4	0.9	1.6 s	2.1	1.2	1.5	1.0	0.7	0.6 v
23	1.5	1.6	1.4	1.6	1.3	1.5	1.7	1.5	1.4	1.1	0.8	0.9 v
24	1.4	2.1	1.7	1.4	1.3	1.7	2.8	1.5	1.4	1.7 s	0.7	0.7
25	1.7	1.7	1.5	1.1	0.7	1.8	2.0	1.1	0.7	1.3 s	0.7	1.2
26	1.9	1.5	1.5	1.0	1.2	1.3	1.5	1.7 s	1.1	1.0	0.9	1.3
27	1.8 s	2.0	1.3	1.2	2.9 s	2.1	1.0	1.0 s	1.8	1.3	1.2	1.5
28	1.8	1.0	1.2	1.0	1.5 s	2.1	1.3	1.7	2.2	1.1	1.4	1.3
29	2.1	1.1	1.2	1.3	1.2 s	2.1	1.0	1.2	2.0	1.3	1.3	1.9
30	1.6		0.9	1.3	1.4	2.2	1.7	1.5	1.5	1.4	1.7	2.1
31	1.1		1.0		1.8		0.6 w	1.7		1.5		1.8

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1929											
1	2.0	2.0	1.5	1.2	1.7	1.1	1.5	0.7 s	0.9	1.3	1.2	1.5
2	1.7	1.5	1.0	1.1	1.4	1.0	1.3	1.0	1.0	1.5	1.6	2.0
3	1.6	1.5	1.0	0.9	1.6	1.0	1.4	0.9	0.9	1.3	2.3 s	2.4
4	1.6	1.3	0.7	1.4	0.9	0.9	1.0	1.6	0.9	1.4	2.8	0.6 s
5	1.9	1.7	1.0	1.4	1.2	0.7	2.3	1.2	1.1	1.5	2.0	1.4
6	1.0	0.7	1.0	1.2	1.5	1.4	1.4	0.9	1.0	1.6	2.1	1.9
7	0.8 w	1.2	1.3	1.0	1.5	1.5	1.5	1.3	0.9 s	1.6 s	1.9	1.0
8	1.2 w	1.6	1.1	0.9	1.5	1.8	1.7	1.3	1.3	1.4 s	1.4	0.6 w
9	1.0 s	1.4	1.3	1.0	1.1	1.8	1.2	1.3	1.5	1.4 s	0.9	0.8 w
10	1.2	1.6	1.7	1.3	1.3	1.5 s	2.7 s	1.2	1.4 s	1.6	1.7	1.1
11	1.2	1.4	2.7	1.2	1.1	2.0	0.9	1.7	0.9	1.6	1.1 w	1.7
12	1.3	1.2	1.3 s	1.6	1.9	1.6	1.3	1.4	0.9	1.0	1.5	0.9
13	1.8	1.7	1.3	1.1	1.4 s	1.2	1.0	0.6	1.0	1.1	1.2	0.6
14	1.6	1.2	1.5	1.3	1.4	0.6	2.0	2.1 s	0.7 s	1.2	1.3	1.7
15	1.3	1.3	1.9 s	1.7	0.9	1.3	1.5	1.1 s	1.2	1.3	1.4	1.0
16	1.1	1.5	2.1	1.2 s	1.1	1.0	0.6	1.0	1.0	1.8 s	1.6 s	1.1 s
17	1.2	1.5 s	1.4	0.9	0.7	1.2	1.0	1.3	1.2	1.5 s	1.5	2.2
18	1.4	1.2	1.3	0.8	0.9	1.0	1.5	1.5	1.2	1.1	1.2	2.3
19	1.4	0.7	1.2	0.9	0.6	1.1	1.3	1.0	1.4	1.5	1.3	2.1
20	1.6	1.1	1.1	1.3	1.2	1.5	1.2	1.4	1.1	1.6	1.7	1.9
21	1.5	1.2	1.1	1.2	0.8	1.6	1.5	1.2	1.2	1.1	1.7	1.6
22	1.4	1.8	1.3	1.2	1.2	1.6	1.1	1.4	1.1 s	1.0	2.0	2.4
23	1.1	1.4	1.4	1.2	1.0	1.1	1.3	1.8	1.4	1.1	1.2	2.1
24	0.9	1.6	1.3	1.1	1.2	0.8	1.9	1.0	1.2	0.8	1.4	1.5
25	0.8	1.7	1.5	1.5	1.0	1.1	1.5	1.2	1.6	0.8	0.8	2.0
26	1.0	1.5	1.7	1.2	1.0	1.4	1.5	1.7	1.2	0.6	1.1	1.0
27	0.9	2.1 s	1.7	1.4	1.3	1.1	1.3	1.1	1.1	0.9	1.6	1.0
28	1.8	1.7 s	1.9	1.3	1.3	0.8	1.3	0.9	0.8	1.0	1.0	1.3
29	1.1		1.4	0.9	0.7	1.5	1.3	1.3	1.1	1.0	1.5	1.5
30	1.2		1.2	1.2	1.0	1.7	1.2	0.7	1.0	0.9	2.5	1.1
31	1.6		1.4		0.8		1.5	0.9		0.7		1.5

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1930											
1	1.4	1.9	0.8	1.3	1.4	1.4	1.7	0.9	0.6	1.1	1.2	1.0
2	1.6	1.6	1.2	1.5	1.9	1.9	1.5	1.0	0.8	1.0	2.1	1.0
3	1.6	2.1	1.4	1.5	1.3	2.0	0.9	1.0	0.8 s	0.8	1.3	0.9 s
4	1.6 s	2.1	1.3	1.7	1.5	1.4	0.9	0.9	0.6	0.8	1.1	0.8 s
5	0.8 s	1.5	1.5	1.2	1.0 s	0.8	1.0	1.1	0.6	1.1	1.1	0.9
6	1.1 s	1.1	1.7 v	1.1	1.6 s	1.1	1.1	0.7 s	1.2	1.1	1.4	1.2
7	1.4	1.1	1.2 v	1.3 s	1.4 s	1.3	1.5	1.4 s	1.0	0.9	1.6	0.8
8	1.4	0.7	1.4	1.0 s	1.2	1.1	0.8	1.3 s	1.4	1.0	1.6	1.2
9	1.6	1.2	1.0	1.3	1.3	1.1	2.0	1.0	1.1	1.2	1.4	0.6
10	0.9	1.0	1.3	1.1 s	1.2	1.0	1.7 s	1.0	0.6	0.9	1.0	0.9
11	1.2	0.9	1.0	1.0	1.2	0.9	1.4	1.3	1.0	1.3	1.0	1.0
12	1.0	1.4 s	1.0 s	1.2	1.1	1.9	1.3	1.1	1.1	1.1	1.1	1.1
13	0.7	1.2 s	1.0 s	1.5	0.8	1.1	0.8	1.1	1.3	1.1	1.1	0.8
14	1.1	1.3 s	1.2 s	1.6	1.1	0.8	1.3	1.0	1.1	1.3 s	1.4 s	0.6
15	1.4	1.4 s	0.8	1.2	1.2	1.5	1.2	1.0	1.0	0.8	0.6	0.7
16	1.3	1.5 s	1.3	1.3	1.8 s	1.1 s	1.7	1.1	1.1	0.6 w	1.2	0.5
17	2.0	1.4	1.2	1.0	0.6 s	1.2	0.8	1.2	0.8	2.8 vs	1.0	0.9
18	0.8 w	1.9	1.5	0.9	1.2	1.8	1.2	1.0	0.7 s	0.9	1.3	1.1
19	0.9 w	1.5	1.3	1.1	1.0	0.9	1.0	0.8	0.7	0.7	1.4	0.8
20	2.4	1.4	1.1	0.9 s	0.8	1.5	1.3	0.5	0.8	0.9	1.2	1.9 s
21	2.1	0.6	1.5	0.8	0.8	1.2	0.7	1.3	1.1	0.7	1.1	1.1
22	1.8	0.5	1.2	1.0 s	1.2	1.5	0.8	0.9	1.2	1.0	1.1	1.2
23	1.3	0.4	1.3	0.9	1.5	1.4	1.6	1.5	1.3	1.1	1.3	1.2
24	1.3	1.1	1.0	1.1	1.2	1.0	1.0	1.2	1.0	1.1	1.6 s	0.7
25	1.2	1.0	1.3	1.0	0.9	1.2	1.4 s	1.1	1.0	1.8	1.6 s	0.6
26	0.6	1.3	1.3	0.9	0.7	1.1	1.4	1.6	1.0	0.6 s	1.5	0.8
27	1.0	1.0	1.2	0.9	1.0	1.6	1.3	1.4	1.2	1.0 s	1.3	1.1
28	1.3	1.3	1.1	0.8	0.7	1.1	1.6	1.5	1.4	1.2	1.4	0.9
29	1.4		1.3	0.9	1.2	1.9	1.9	1.4	1.1 s	0.9	1.4	1.4
30	0.8		1.4	1.6	1.6	1.8	2.1	0.8	0.5 s	0.7	1.5	0.9
31	1.6		1.4		1.8		1.5	0.8		0.9		0.5

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1931						
1	1.0	0.6	0.5	1.2	1.2	1.9	0.8	1.0	0.9	0.8	1.7	0.7
2	0.7	0.6	0.8	1.0	1.0	1.0 s	1.1	0.9	0.7	1.2 s	0.7	1.0 s
3	1.0	0.7	0.9	1.3	1.2	0.8	1.2	1.1	0.8	1.3	1.0	0.7
4	1.0	1.5	0.7	1.2	0.8	0.7	1.0	1.4	0.8 s	1.7	0.5	0.5
5	1.0	1.1	1.0	1.2	1.3	1.2	0.7	1.4	0.9	0.9 s	1.4	0.5
6	1.2	1.2	1.3	1.2	1.2	0.8	1.3	1.0	1.0	1.0	0.9	0.2
7	1.4	1.1	1.2	0.8	0.9 s	1.1	1.2	0.7	0.8	0.7	1.0	0.6
8	1.3	1.3	1.5	1.0	1.4	1.5	1.3	1.0	0.8	1.3	0.8	0.8
9	1.2	1.1	0.9	0.6	1.0	0.5	1.4	0.7	0.7	1.3	1.0	1.1
10	1.3	0.7	1.0	0.8	1.1	0.8	1.2	1.1	0.8	1.2	1.0	1.1
11	1.4	0.8	0.6	0.6	1.0	0.6	1.4	0.9	0.8	1.2	1.1	1.6
12	1.3	0.7	1.2	1.0	0.7	1.5	1.2	1.3	0.5	1.2 s	0.9	0.8
13	1.0	0.7 s	0.9	0.7	1.3	0.8	1.2	0.7	0.7	0.9	1.0	1.1
14	0.8	0.5 s	0.9	1.2	0.9	0.9	1.7	0.9	0.9	1.1	0.8	1.3
15	0.8	0.9	1.2	0.8	0.8	1.0	1.4	1.1	0.9	1.1	1.2	1.1
16	1.6	0.9	1.1	1.0	0.7	0.7	1.4	1.0	0.7	0.7	0.9	1.1
17	1.0	1.0	1.0	1.0	1.1	0.9	1.1	0.8	1.2	0.8	1.0	0.4
18	1.4	1.2	1.2	0.7	0.7	0.6	1.1	1.0	1.2	0.9	0.5	0.4
19	1.2	1.0	1.2	1.5	0.8	0.5	1.0	1.0	1.2	0.8	1.0	0.5
20	1.3	1.5	1.4	0.7	1.1	0.4	0.9	0.6 s	1.2	0.6	0.8	0.8
21	1.2	1.0	1.3	1.1	0.7	0.9	1.3	0.6	0.7	0.8	1.1	0.5
22	1.1	1.4	1.2	1.0	0.6	0.5	1.3	0.4	1.0	0.9	0.7	0.8
23	1.5	0.9	1.1	0.8	0.5	0.5	1.9	0.8	0.7	0.6	1.5	1.1
24	1.1	0.9 s	1.0	0.8	0.4	0.7	1.1	1.0	1.0	0.9	0.9	0.9
25	1.7	0.6	1.2	0.9	0.7	0.7	0.7	0.8	1.1	0.9	0.7	1.4
26	0.3	0.5	0.6	0.7	0.8	1.6 s	1.0	1.0	1.1	1.5	0.6 s	1.3
27	1.1	0.6	1.0	0.7	0.7	0.8	1.2	1.3	1.2	1.1	0.8 w	0.7
28	0.8	0.8	0.7	0.6	0.6	1.0	1.0	0.8	1.4	1.4	1.0	1.6
29	0.6		0.9	0.9	0.8	1.2	1.0	0.6	1.0	0.1 s	1.1	1.0
30	0.5		0.7	0.7	0.4	0.9	1.1	1.1	0.8	0.7 s	1.1	1.2
31	0.5		1.0		0.8		1.6	1.1		0.7		1.4

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1932						
1	1.3	0.8	0.5	1.1	1.4	0.7	0.9	0.8	0.6	1.0	1.1	0.6
2	1.1	0.4	0.7	0.9 s	1.4	1.0	0.9	1.0	0.7	1.1	0.9	0.9
3	0.6	1.0 s	0.4	0.9	1.5	1.2	0.9	0.7	0.9	0.9	0.5	0.9
4	0.6	0.7 s	0.8	0.8	1.5	0.7	1.5 s	0.6	0.8	1.3	0.7	0.8
5	0.8	1.0	1.0	0.9	1.0	1.5	1.4	1.3	1.0	1.0	0.9	0.4
6	0.9	0.9	0.7	1.1	1.1	1.3	0.8 s	0.7	0.4 s	0.8	1.2	0.4
7	1.1	0.7	1.2	0.7 s	1.1	1.2	0.7	0.7	0.6	0.6	1.0	0.7
8	0.9	1.0	1.1	0.8	1.3	1.4	1.3	0.9	0.9	0.5	0.4	1.2
9	0.8	1.1	1.0	0.9	1.2	1.5	1.0	1.0	0.8	1.0	1.0	0.7
10	0.7	0.9	1.2 s	1.2	1.0	1.2	1.0	0.8	0.6	0.7	0.6	0.4
11	1.1	0.7 w	0.9	0.9	0.8	0.7	0.6	0.8	0.4	0.9	1.0	0.7
12	0.7	1.2 v	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.8	1.0	0.8
13	0.8	0.7	0.9	1.2	1.0	0.7	0.8	0.9	0.6	0.7	0.8	1.3
14	0.8	0.9	1.1	0.8 w	0.9	1.1	0.8	0.9	0.8	0.8	0.8	1.2 s
15	1.2	0.5	1.1	0.5 w	1.0	0.9	0.8	0.7	1.0	0.6 s	0.9	1.2 s
16	0.9	0.8	1.1	0.7	0.9	1.0	0.8	0.8	0.8	0.9	1.0	1.2 s
17	1.0	0.3	1.0	0.7	0.8	1.1	0.7	0.7	0.6	1.2	0.9	0.7
18	0.7	0.6	0.8	0.5	0.9	0.9	1.0	1.0	1.2	1.1	1.2	0.8
19	1.1	1.0	0.8	0.7	1.0	1.2	0.8	0.7	1.1	0.7	0.8	0.5 w
20	0.7	1.0	0.8	0.9	1.3	0.9	0.8	0.7	1.0	1.1 s	0.9	1.2 w
21	0.3	0.8	0.8	1.2	1.1	1.1	0.9	0.5	0.9	0.9	0.8	0.5 w
22	0.7	0.8	1.2	1.2	0.7	1.3	1.4	0.9	1.0	0.9	0.6	0.6 w
23	0.8	1.1	1.3	1.2	0.7	0.7	1.1	0.6	0.8 s	0.5	0.7	0.7
24	1.3	1.1	1.4	1.2	0.9	1.0	1.0	0.5	0.7 s	0.8	0.9 v	0.6
25	0.3 w	1.2	1.2	0.9	1.1	1.3	0.7	0.8	0.6 s	0.4	0.9	0.5
26	1.4	1.4	1.2	0.8	1.1	1.1	1.2	0.3	0.9	0.7	0.7	0.7
27	1.1	1.1	1.5	0.9	0.9	0.6	1.2	1.1 s	0.7	0.8	0.7	0.7
28	1.3	0.9	1.4 s	0.5	1.0	0.7	1.0	0.8 s	0.7	0.7	0.9	0.6
29	1.5	0.8	1.2 s	0.4	1.1 s	0.5	0.8	0.7 s	1.2	0.6	0.9	1.2
30	1.2		0.9 s	0.6	0.6 s	1.2	0.9	1.0	1.1	0.6	0.8	0.7
31	0.7		0.8 s		0.7		1.1	0.8		0.8		1.3

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1933						
1	1.4	1.4	1.1	0.7	1.0 s	0.5	0.5	0.4	0.7	1.0	1.0	0.8
2	0.9	0.8	1.1	0.7	0.8	0.8	0.3	0.7	1.0	0.7	1.9	1.2
3	0.7	0.9	1.1	0.8	1.1	0.7	0.7	1.0	1.0	0.9	1.7	1.1
4	1.3	1.0	0.8	0.7	0.8	1.1	0.5	0.6	0.8	1.3	1.3	0.6
5	0.6	0.7	0.8	0.6	1.1	0.9	0.6	1.2 s	0.6	1.2	1.1	0.8
6	0.5 w	0.8	0.4	0.7	0.7	1.2	0.6	1.1	0.9	1.0	1.5 s	0.8
7	0.7	0.7	0.8	0.8	0.9	0.9	1.2	0.5	0.5	1.3 s	0.7 s	0.8
8	0.7	1.1	0.9	0.6	0.8	1.1	1.2	0.9	0.7	1.2	1.3 s	0.9
9	0.9	0.8	1.0	0.8	0.9	0.9	0.6	0.8	0.9 s	1.0	0.7	1.1 s
10	0.8	1.0	1.0	0.9	1.1	0.9	1.0	0.9	0.8	1.0	0.6	0.8
11	0.5	1.2	0.5	0.9	0.7	0.7	1.0	0.7	0.8	0.9	1.0	0.7
12	0.9	1.2	0.7	1.0	1.0	1.0	0.8	0.9	0.6	0.7	0.9	0.9
13	1.0	1.4	0.8	1.0	1.0	0.8	1.1	1.0 s	0.6 s	1.2	0.5	1.2
14	1.0	1.2	0.9	1.0	1.0	1.0	0.6	0.4	0.7	0.8	0.4	0.6
15	1.0	1.1	1.1	0.9	0.6	0.6	0.8	0.7	0.6 s	0.8	0.9	0.8
16	1.0	0.9	0.9	0.7	0.8	1.0	1.1	1.0	0.9	0.9	0.8	0.8
17	1.1	0.9	0.8	0.4	0.8	0.7	1.0	1.0	0.6	0.7	0.7	0.9
18	1.0	0.8	0.9	0.6	0.8	0.9	1.1	1.0	0.8	0.6	1.2	0.8
19	0.8	0.5 s	0.9 s	0.5	0.8	0.6	0.6	1.0	1.0	0.8	1.2	0.8
20	1.1	0.9	0.8 s	0.5	0.8	0.9	0.9	0.9	1.1	0.8	1.4	1.1
21	0.7	0.7 s	0.8 s	0.9	0.5	0.9	1.0	1.0	1.0	0.7	0.9	1.0
22	1.2	0.9 s	0.4 s	0.9	0.9	1.1	0.6	1.1	1.0	1.1	1.0	1.1
23	0.8	0.7 s	0.7 s	0.6	0.6	1.0	0.8	1.1	1.0	1.2	0.7	1.0
24	0.6	0.6 s	0.7 s	0.9	0.7	1.0	0.6 s	1.0	0.8	1.1	0.6	0.6
25	0.9	1.3	1.0	0.8	0.8	1.6	1.1	0.7	0.9	0.4	0.7	1.0
26	1.0	1.2	1.0	0.9	0.8	0.7	1.0	0.9	1.0	0.6	0.6	0.8
27	1.3	1.1	1.0	0.7	1.0	1.0	0.8	0.8	0.9	0.5	0.9	1.0
28	1.2	1.3	0.8	0.8	0.6	0.6	0.8	0.9	0.9	0.8	0.9	0.8
29	1.2		0.9	0.7	0.7	0.5	0.6	1.1	1.1	0.9	0.7	0.8
30	1.4		0.9	1.3	1.0	0.4	0.3	0.8	1.0	0.9	1.0	1.1
31	1.3		1.0		0.9		0.4	1.1		0.8		0.9

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1934						
1	1.5 s	1.0	0.8	1.1	1.5	1.1	0.6	0.7	0.9	1.0	1.0	1.0
2	0.8	0.8	0.8	1.0	1.4	0.9	0.6	0.7	0.2	0.8	0.9	0.8
3	0.8	1.2	0.6	1.3	0.8	1.5	0.7 s	1.1	0.8	1.0	0.9	0.9
4	1.0	1.1	1.3 s	1.3	1.0	1.2	0.6	0.9	0.9	0.7	0.9	0.3 s
5	1.1	1.2	0.9 s	0.7	1.2	1.0	0.6	0.5	0.9	0.7	1.0	0.6
6	0.8	0.7	0.8	0.7	1.2	1.3	0.9	0.7	1.1	1.0	1.0	0.5
7	1.4	0.6	0.7	0.7	1.0	0.7	0.8	0.9	0.9	1.2	1.4 s	0.9
8	1.0	1.0	0.8	0.9	0.7	1.1	0.7	0.8	0.9	1.0	1.2	1.0
9	0.9	0.3 s	0.7	1.0	0.7	1.1	1.1	0.9	0.9	0.8	1.5	0.9
10	0.8	0.4	0.6	1.0	0.6	1.0	0.9	0.8	0.7	1.0	1.1	1.3
11	0.5	0.8	0.8	1.1	0.9	1.1	1.3	1.0	0.7	1.1	1.0	1.3
12	0.4	0.9	0.6	0.9	0.9	1.8	0.8	1.4	0.8	0.9	0.7	0.6
13	0.7	1.2	0.8	0.9	0.8	0.6	1.0	0.7	0.9	0.8	0.6	0.9
14	1.0	0.8	1.0	1.1	0.6	1.6	1.3	0.7	0.9	1.0	0.9	0.7
15	0.6	0.5	0.9	1.0	1.0	0.7	0.7	1.0	0.7	0.6	0.9	0.7
16	1.3	1.2 s	1.4	0.9	0.8	1.1	1.0	0.8	0.6	0.8	0.9	0.4
17	1.1	1.0	1.0	0.9	0.9	0.9	1.0	1.1	0.9	0.6	0.7	0.8
18	1.0	1.3	1.1	1.0	0.7 s	1.4	1.3	1.0	0.6	0.6	0.9	0.6
19	0.9	0.8	0.9	0.8	1.0	0.9	0.6	0.6	0.9	1.0	0.9	1.0
20	1.0	0.7	0.9	0.6	1.2	1.0	1.0	0.8	0.8	1.1	0.9	0.8
21	1.0	0.8	0.8	0.7	1.1	0.9	0.7	0.6	0.8	0.9	0.9	1.4
22	1.5	0.5	1.0	0.6	0.7	0.9	1.0	0.7	0.6	1.0	1.1	1.2
23	0.6	0.7	0.9	0.7	0.9	1.2	0.7	0.8	0.7	1.0	1.6	1.5
24	0.9	0.5	1.0	0.8	1.0	0.7	1.0	1.4	0.8	0.8 s	2.0	1.6
25	0.8	0.6	0.8	0.7	0.9	1.6	0.8	1.3	0.6	1.1 s	0.6	1.9
26	0.9	0.6	0.7	0.5	0.6	1.0	0.9	1.2	1.1	0.9	1.1	1.7
27	0.5	0.9	0.9	0.8	1.0	0.9	1.4	0.9	0.8	0.6	1.7	1.2
28	0.7	1.0	1.3	0.6	1.1	0.8	1.4	0.4	0.8	0.7	1.7	1.0
29	0.6		0.8	1.0	1.1	0.8	1.0	0.9	0.9	0.7	1.8	2.4
30	0.9		1.1	1.1	0.9	0.6	0.4	0.7	0.9	0.5	1.1	0.5 s
31	1.2		0.7		0.7		1.1	0.9		0.8		1.0

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1935											
1	1.0	...	0.9	0.7	1.5 s	0.8	1.2	1.4	0.7	1.0	1.7	2.1
2	0.4	0.3 s	0.5	1.0	1.0	0.7	0.7	1.1	0.9	1.2	1.6	1.7
3	0.8	0.8	0.7	1.0	1.2	1.2	0.6	0.8	0.6	1.2	0.8	1.5
4	0.9	1.0	0.8	1.3	1.2	0.6	0.6	1.4	1.2	1.1	0.9	1.6
5	1.0	1.2	0.8	1.0	1.2	1.1	0.7	1.0	1.2	1.1	1.4	1.4
6	1.1	1.0	0.9	1.0	1.2	1.1	1.3	0.8	1.1	1.0	1.1	1.0
7	0.9	1.3	1.0	0.9	1.0	1.9 s	1.0	1.1	0.9	0.9	1.2	0.6
8	1.0	1.3	0.8	1.0	0.9	1.1 s	0.9 s	1.1	0.8	1.0	0.9	1.1
9	1.0	1.0	0.6	0.6	1.1	1.0 s	0.7	1.2	0.9	0.6	1.5	1.0
10	0.6	1.2	0.7	1.0 s	1.6	0.4	1.1	1.0	1.0	0.9	1.2	1.8
11	0.7	1.1	0.4	0.6 s	0.9	1.4	0.7	0.6	1.5 s	1.1	2.0	1.0
12	0.8	0.9	1.1	0.5 s	0.8	0.9	1.2	0.9	0.9 s	1.0	2.7 s	1.6
13	0.7	1.1 s	0.8 s	0.6	1.0	1.0	1.0	0.8	1.0	1.0	1.9	1.7
14	0.8	0.9 s	0.7 s	0.7	0.9	0.9	1.4	1.0	1.1	1.3	1.8	2.2
15	0.9	1.3	0.8	0.7	1.3	0.8	1.1	1.1	0.7	1.4	1.3	1.6
16	0.8	1.2	1.0	1.1	1.2	0.7	1.3	1.4	1.0	1.0	1.3	1.3
17	0.6 s	1.2	0.9	0.8	1.1	1.5	1.3	1.6	1.1	1.4	1.2	1.5
18	0.8	1.3	1.1	1.0	1.2	1.1 s	1.5	1.8	0.9	1.4	1.7	1.0
19	0.9	0.5	1.0	1.0	1.1	1.3	1.8	1.6	1.2	1.0	1.7	0.9
20	1.1	1.4	1.0	0.8	0.8	0.8	1.9	1.5	0.9	1.0 s	1.3	1.0
21	1.2	1.1	1.4	1.0	1.1	0.9	1.8	1.0	0.9	1.1	1.1	0.8
22	0.9	1.1	1.2	0.9	0.9	0.9	2.0	0.9	0.9	0.8	0.8	0.8
23	1.1	1.4	1.3	1.0	1.0	1.0	1.6	0.9	1.2 s	1.1	1.4	0.7
24	1.2	1.2	0.9	0.9	0.7	1.0	1.4	1.0	1.0	0.3 s	1.2	0.9
25	1.1	1.0	0.8	0.5	1.0	1.0	1.4 s	0.8	0.9 s	1.3	1.5	1.5
26	0.9	0.6	1.0	0.4	1.0	1.2	0.8	1.1	1.0	1.0	1.4	1.4
27	2.2 s	0.5	0.9	0.6	0.8	1.2	1.0	1.4	1.2	0.9 s	2.3	2.0
28	1.4	0.7	0.9	0.5	0.7	1.2	1.2	1.0	1.2	1.1	1.4	2.0
29	0.8		0.9	0.6	0.8	1.5	1.0	1.3	1.1	1.1	1.5	2.2
30	...		0.8	0.8	0.6	1.1	1.1	1.3	1.2	0.3	1.9	2.2
31	0.9		0.6		...		1.1	1.1		1.1		2.7

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1936											
1	2.3	1.0	1.1	1.2	1.1	1.6	1.7	1.2	1.1	1.8	2.5	1.7
2	1.6	1.6	0.6	1.0	1.4	2.2 s	0.7	1.2	1.4	1.5	2.9	1.7
3	1.7	0.9	0.8	1.3	1.1	1.7	1.4	0.8	1.5	1.5	2.0 s	1.8
4	0.8	1.1	1.0	0.9	1.1	1.4	1.3	1.0	1.5	1.7	1.7	1.9
5	0.6	0.6	0.9	1.1	1.0	1.3	1.5	1.4	1.4	1.7	1.9	1.9
6	0.5	1.2	1.4	1.5	1.1	1.5	0.9	1.3	1.1	1.8	2.2	1.5
7	0.6	0.8	0.9	1.3	1.5	1.1	1.5	0.8	1.1	1.6	1.0	1.1
8	0.5	1.2	1.2	1.4	1.7	1.9	1.0	1.2	1.3	1.1	1.8	1.2
9	1.1	1.4	1.2	1.0	1.6	1.3 s	1.1	1.2	1.1	1.2	0.5	1.3
10	1.0	1.6	1.2	1.0	2.0	1.4	1.6	0.9	0.8	1.0	1.8	1.1
11	1.5	1.6	1.7	1.1	1.3	1.5	1.8	0.7	0.6	1.1	1.5 s	0.9
12	1.4	1.5	1.5	1.6	1.6 s	0.9	1.0	1.0	1.0	1.1	1.8	0.9
13	1.2	1.2	1.9	1.3	1.2	1.6	1.3	1.0	1.5	1.3	2.3	0.9
14	1.7	1.9	1.3	1.4	1.3	1.4	1.7	1.0	1.2	1.1	1.7	1.4
15	1.2	1.5	1.0	1.4	1.3	1.6	1.1	1.2	1.1	1.4	1.2	1.3
16	0.8	1.5 s	1.0	0.7	1.1	1.3	1.4	1.3	1.5	2.2 s	1.9	1.3
17	1.2	1.2 s	1.3	1.1	1.1	1.3	1.2	1.1	1.3	1.2 s	2.1	1.2
18	1.3	1.3	1.6	1.3 s	1.0 s	2.0	1.6	0.8	1.5	1.7	2.0	1.3
19	1.2	1.7 s	1.2	1.3 s	1.3	1.0 s	1.0	1.2	1.5	1.9	2.1	2.0
20	1.0	1.3	0.8	1.4 s	1.2	1.4	1.2	1.1	1.4	1.6	1.2	1.7
21	1.0	1.4	0.8	1.3 s	1.4	1.6	1.3	1.5	1.4	1.1	1.5	1.8
22	1.3	1.1	1.2	1.2 s	1.3	1.4	0.5	1.6	1.4	1.4	1.1	1.6
23	1.5	1.5	1.7	1.4	1.1	1.7	1.3	1.1	1.0	1.4	1.3	1.6
24	1.6	1.7	1.2 s	1.1	1.4	1.7	0.8	1.3	1.0	1.6 s	1.4	0.7
25	1.2	1.8	1.6	1.1	1.6	1.4	1.2	1.7	1.3	1.1	1.4	1.5
26	1.8	1.4	1.6	1.3	1.2	2.0	1.2	1.0	0.7	1.4	1.7	1.8
27	1.5	1.2	1.4	1.1	1.1	0.8	1.0	1.4	1.1	1.0	1.3	2.3
28	1.3	1.6	1.0	0.9	1.0	1.4	0.8	1.4	1.8	1.3	2.2	1.4
29	1.8	1.4	1.0	0.8	1.3	1.5	1.1 s	1.5	1.8	1.3	2.0 s	2.2
30	1.4		1.2	0.8	1.1	1.4	1.2	1.6	1.7	1.1	2.4	3.1
31	1.6		1.0		0.7		1.4	1.2		1.3		2.7

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1937											
1	2.2	2.4	1.8	1.6	1.6	1.3	1.2	1.3	1.0	1.6	2.0	1.6
2	2.3	2.6	1.5	2.1	1.3	1.8	1.1	0.6 s	1.1	1.7	2.3	1.5
3	1.8	3.2 s	1.5	1.6	1.2	1.1	1.5	1.6	1.6	1.5	1.9	1.5
4	1.5	2.2	1.5	1.0	1.6	1.5	1.3	0.8 s	1.2	1.8 s	1.9	1.4
5	1.8	1.7	1.7 s	1.0	0.6	1.5	1.8	1.8	1.5	2.1	2.1	1.3
6	1.5	1.4	1.5	1.3	1.4	1.2 s	1.2	1.5	1.8	2.6	2.1	1.4
7	2.2 s	0.7	1.4	0.9	1.1	1.2	1.6	2.0	1.6	1.9	2.1	1.8
8	1.1	0.8	1.2	1.2	1.3	1.9	1.6	1.7	1.8	1.9 s	1.7	1.5
9	1.5	1.6 s	1.4	1.0	1.2	1.5	2.2	2.0	1.0	1.5 s	1.6	1.8
10	1.3	1.0	1.3	1.1	1.3	1.8	1.7	2.1	1.9	1.6 s	1.5	1.5
11	1.3	1.9	1.4	1.4	1.1	1.6	2.1	1.5	0.9 s	2.4 s	1.6	1.3
12	1.7	1.9	1.4	1.6 s	1.6	1.8	1.2	2.1	1.4	1.7 s	1.2	1.3
13	1.6	2.1	1.9	1.4	1.6	2.1	1.9	2.2	1.5	1.1	1.5	1.2
14	1.6	2.1	1.6	1.3	2.1	2.1	0.9 s	2.2	1.3	1.3	0.6	1.4
15	1.5	1.4	1.8 s	1.3	1.7	1.8	1.5	1.5	1.2	0.8	1.2	0.7
16	1.8	1.8	1.6	1.4	1.3	1.8	1.8	1.4	1.2	1.2	1.2	1.4
17	1.5	2.4	1.5	1.0	1.3	2.4	1.7	1.4	1.1	1.4	2.2	1.7
18	1.7	1.7	1.6	1.0	1.5	2.0	1.4	1.5	1.7	1.3	1.7 s	1.5 s
19	1.7	1.9 s	1.7	1.0	1.3	1.7	2.7 s	1.6	1.4	1.3	1.4 s	2.0 s
20	1.8	1.1	1.1	0.8	1.2	2.1	1.5	1.6	1.6	1.2	2.1	2.2
21	2.1	1.6	1.3	1.0	2.1	2.3	1.8	1.9	1.5	0.9	2.6	2.3
22	1.3	1.6	1.2 s	1.0	1.4	2.3	1.2 s	1.5 s	1.3	1.6	2.8	2.3
23	1.3	1.6	1.3	1.0	1.4	2.2	2.0	1.4	1.7	1.8 s	2.3	2.4 s
24	0.8	2.2	1.7	2.1 s	1.4	1.6	2.2 s	1.3	1.4	1.2 s	2.8	2.4
25	1.5	2.1	1.6	2.3 s	2.1	2.0	1.5	1.9	1.5	1.3	2.3	1.7
26	1.3	2.2	1.8	2.5 s	1.3	1.5	1.6	2.4	1.7	1.0	1.9	1.8
27	1.8	2.2	1.2 s	1.3 s	2.0	2.0 s	1.3	1.4	1.2	1.0	1.2	1.5
28	1.4	2.0	1.5	0.9 s	1.2 s	1.5	1.6	2.1	1.2	1.2	1.2	1.5
29	2.1		1.4	1.3	1.3	1.1	1.7	1.7	1.3	0.9	1.6 s	1.2
30	3.3		1.8	1.0	1.6	1.9	1.6	1.1	3.8 s	1.1	1.6	1.1
31	2.4		1.4		1.3		1.8	1.1		1.2		1.3

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1938											
1	1.2	1.2	1.1	1.8	1.8	1.4	1.4	1.3	1.2	1.9 s	1.4	1.2
2	1.0	1.7	1.3	1.4	1.7	2.1	1.4	1.4	1.3	1.7	1.5	1.3 s
3	1.5	2.1	1.2	1.4	2.0	1.2	1.6	2.1 s	1.0	1.9	1.6	1.3
4	0.9 s	1.5	1.5	1.3	1.8 s	1.3	1.7 s	2.0 s	1.3	1.4	2.0	1.2
5	1.5	1.3	1.3 s	1.4	1.5	1.0	1.4	1.5	0.9	1.5	2.0	1.6
6	1.7	2.0 s	1.5	1.8	1.8	1.0	1.6	1.1	1.0	2.0	1.9	1.0
7	1.4	1.2	0.8	1.2	1.4	1.0	1.7	1.5	1.7	1.2 s	1.8	1.4
8	1.6	3.0 s	1.0	1.2	1.8	1.0 s	1.4	1.8	1.5	1.6 s	1.4	1.6
9	1.2	1.2	0.9	1.1	1.4	1.1	1.9	1.7	1.3	1.5	1.6 s	2.7
10	0.9	1.1	0.5	0.8	1.1	1.8	2.0	1.6	1.2	1.4	1.9	2.7 s
11	1.4	1.1	1.1	1.2	3.6 s	1.7 s	1.4	1.2 s	1.3	1.5	2.3	1.9
12	1.6	1.1	1.2	1.2	0.7 s	1.9	1.7	0.9	0.7	1.8	1.9	1.5
13	1.5	1.7	1.0	1.5 s	1.1	2.0	1.2	1.3	1.4 s	1.8	2.2	1.8
14	0.8	1.1 s	1.5	1.1 s	2.0 s	1.4	1.5	1.3	1.7 s	1.5	2.3	1.5
15	1.2	1.7	1.7	1.3	2.2	1.6	1.7 s	1.2	0.9 s	1.5	1.2	1.6
16	1.9 s	1.2	1.5	0.8 s	1.7	1.0	1.8 s	1.1	1.7	1.0	1.2	2.8 s
17	1.9 s	1.8	2.0	1.5	1.4	1.2	2.0	1.4	0.9	1.2	1.6 s	2.2
18	2.0	1.4	1.6	1.8	1.4	1.2	1.5	1.2	1.3	1.2	1.7	2.4 s
19	2.5	1.5	1.8	1.7	1.3	1.8	1.3	1.4	1.0	1.0	1.9	1.5
20	2.4	1.5	1.8	1.5	1.5	1.5	1.7	1.2	1.5	1.1	1.4	1.8
21	1.7 s	1.6	1.4	1.3	1.2	1.1	1.8	1.9	1.4	1.5	1.6	0.9
22	1.1 s	1.1	1.2 s	2.0	1.1	1.6	1.1	1.7	1.3	1.6	1.7	2.1
23	2.2	0.8	1.3 s	1.0 s	1.0	1.5	1.8	1.3 s	1.5	1.2	1.3	1.7
24	2.0	0.7	1.1 s	1.1	1.4	1.7	1.5	1.6	1.6	1.1	2.4	2.6
25	3.4 s	1.2	1.5	1.1	0.7	1.2	1.9	1.2	2.0	1.4 s	2.0	1.9
26	1.4 s	0.9	1.2	1.1	0.9	1.6	1.2	2.0	1.9 s	1.5 s	1.5	2.6
27	0.9	0.8	1.0	1.1	1.0	1.5	0.9	1.4	1.9 s	1.7	1.4	2.1
28	0.5	1.6	1.0	1.3	1.9	1.9	1.6	1.8	2.0 s	1.4	1.5	1.7
29	0.7		1.6	1.3	0.9	1.5	1.9	2.0	1.8	1.5	1.9	1.5
30	1.2		1.4	1.2	1.0	1.8	1.6 s	1.4	2.1 s	1.7	1.1	1.9
31	1.7 s		1.7		1.6		1.9	1.2		1.3		1.0

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Continued

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1939						
1	1.2	1.8	1.2	1.0	1.4 s	1.9	1.6	1.6	1.0	1.9	1.8	1.4
2	1.2	0.9	1.0	0.7	1.5 s	2.0	1.5	1.5	1.6	2.2	1.7	1.2
3	1.2	1.1	1.1	1.2	1.7	1.6	1.6 s	1.4	1.2 s	2.4 s	1.5	1.1
4	0.8	1.4	1.5	1.3	2.0	2.0	2.9 s	1.7	1.2	1.6 s	1.0	1.1
5	1.0	1.5	1.5	1.2	1.5	1.7	1.6 s	1.4	1.2	1.9	1.2	0.5
6	1.5	1.3 s	1.2	1.2	1.7 s	1.7	1.5	1.7	1.4	1.3	0.8	1.1
7	1.6	1.7	1.4	1.6	1.4 s	1.5	1.6	1.7	1.2	1.9	1.6	1.0 s
8	2.1	2.2	1.4	1.0	1.5 s	1.3	1.6	2.0	1.2	1.7	1.1	0.8
9	2.1	2.2	1.1	1.2	1.3	1.3	1.6	1.8	1.0	0.7	1.2	1.1
10	2.0	2.0	1.5	1.1	1.7	1.5	1.2	2.1	0.9	1.2	1.8	1.1
11	2.2	1.8	1.5	1.2	0.9	1.4	1.5	1.7	1.3	1.1	1.8	1.6
12	1.8	1.2	1.0	0.8	1.0	1.6	0.8	1.4 s	1.2	1.3	1.8	2.1
13	2.5	1.0	1.0	1.0	1.4	2.4	1.2	1.5	1.5	2.6 s	1.4 s	1.3
14	2.0	0.9	1.0	1.1	1.0	1.3 s	1.9	1.7	1.0	1.4 s	1.5	1.7
15	1.3	0.9	0.9	1.0	1.0	1.7	1.4	1.8	1.6	1.5 s	1.2	1.4
16	1.7	1.1	0.9	1.3	1.0	0.9	2.3	1.1 s	1.6	1.9 s	1.6	1.5
17	0.9	0.9	0.7	0.9 s	1.6	1.6	1.9	0.9	2.0 s	1.9	2.0	1.0
18	1.0	1.5	0.9	1.3 s	1.2	1.5	1.8	2.1	1.1	1.3	1.3	0.9
19	1.6	1.5	0.9	1.5 s	1.6	1.7	2.0	1.9	1.0	1.5	1.0	1.0
20	1.4	1.8	1.5	1.7	1.4	1.1	1.4 s	0.8	1.2	1.3	0.7	1.1
21	1.7	1.4	1.5	2.6	1.4	1.3	2.2 s	1.4	1.3	1.2	0.7	1.0
22	1.4	1.7	1.5 s	1.4	1.2	1.1	1.6	0.9 s	1.4	1.4	1.0	1.0
23	1.5	1.6	1.1	0.8 s	1.6	1.9	1.6	0.8 s	1.0	0.9	0.9	1.3
24	1.7	3.1 s	1.2	3.0 s	1.4	1.2	1.8	1.4	1.0	1.1	1.8	0.9
25	1.9	1.3 s	1.5	1.0 s	1.3	1.4	1.2	1.3	0.9	1.3	1.2	0.7
26	1.8	1.8	1.6	1.2	1.2	1.4	1.7 s	1.7	1.4	1.3	1.1	0.9
27	1.6	1.5	1.7	1.3	1.6	1.1	1.1	1.4	2.0	1.6	1.4	1.4
28	1.8	1.5	1.3 s	1.4	1.7	1.5	1.8	1.8	1.5	1.5	1.4	1.7
29	1.5		0.9 s	1.6	1.8	1.3	1.7	1.4	1.6	1.2	1.2	1.8
30	1.2		1.1	1.0	1.3	2.2	1.8	1.2	2.0	1.2	1.7	1.9
31	1.0		1.0		1.6		1.5	1.8		1.1		2.0

Day	Compiled from Huancayo data for month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						Year 1940						
1	1.8	1.4 s	1.1	0.8 s	1.2	1.3	1.0	1.6	0.6	1.2 s	1.7	1.2
2	1.3	1.3	0.8	1.3	1.5	1.2	0.9	1.2	1.5	1.6	1.9	1.1
3	2.5 s	0.9	0.8	1.1 s	1.0	1.2	1.3	1.0	1.4	1.5	1.4	1.0
4	1.5	1.6	1.1	1.4	1.1	1.4	1.0	1.5	1.6	1.5	1.5	1.2
5	0.8	1.2	1.1	1.4	1.2	1.6	1.1	1.4	1.2	1.4	1.6	1.2
6	0.4	1.4	1.2	1.1	1.4	1.6	1.4	1.5	1.6	1.3	1.3	1.6
7	0.9	1.1	1.0	1.1	1.3	0.9	1.2	1.2	1.1	0.9 s	1.2	1.0
8	1.4	1.7	1.1	1.2	1.1	1.6	1.0	1.6	1.0	1.2	0.7	1.0
9	1.7	1.2	1.0	1.1	0.9	1.5	1.3	1.5 s	0.9	1.3	1.0	1.2
10	1.6 s	1.7	1.5	1.2	1.0	1.0	0.7	1.3	0.9	1.4	1.0	1.4
11	2.1	1.3	1.2	1.3	0.7	1.1	1.0	0.8	1.0	1.3	1.6	1.1
12	1.5	1.1	1.7	1.2	1.2	1.5	1.0	0.9	0.8	1.4	2.7	0.7
13	1.6	1.5	1.2	0.9	1.6	1.0	0.6 s	0.8	0.9	1.3	1.3	0.9
14	1.8	1.1	1.1	1.2	1.0	2.4 s	0.9	1.3	1.3	1.2	2.0	1.3
15	1.2	1.1	1.3	0.9	1.1	1.0	0.9	1.4	1.1	1.3	1.6	1.0
16	1.4	1.1	1.0	1.0	0.6	1.3	1.4	1.4	1.2	1.3	2.0	1.4
17	1.4	1.3	1.1	0.9	1.6	1.1	1.2	1.5	1.5	1.4	2.4	0.8
18	1.6 s	0.9	1.1	1.1	1.1 s	1.2	1.1	1.9	1.3	1.4	1.3	1.5
19	0.9	1.2	1.3	0.9	1.4	1.2	1.0	1.3	1.3	1.2	1.6	1.1
20	1.0	0.6	1.3	1.2	1.1	1.8	1.3	1.2	1.7	1.2	1.8	1.3 s
21	1.0	1.0	0.9	1.1	0.9	1.3	1.6	1.3	1.3	1.5	1.6	0.8 s
22	1.1	0.8	1.1	1.1	1.0	1.0	1.1	1.3	1.2	1.1	1.8	1.0
23	0.9	0.8	1.5 s	1.1	1.7	1.0	1.1	1.3	0.9	1.3	1.2	0.7
24	1.0	1.2	4.9 s	1.0	1.3 s	1.0	1.2	1.9	1.0	1.3	1.5	0.6
25	1.0	1.4 s	1.8 s	1.3 s	1.0	0.6 s	1.3	1.2	1.5	1.3	1.2 s	0.2
26	1.5	1.2	0.8 s	1.2	1.4	1.3	1.0	1.3	2.7 s	0.9	1.0	0.9
27	1.6	1.2	2.5	1.1	0.6	1.5	1.3	0.8	1.1 s	0.7	0.7	0.4
28	1.5	1.3	1.3	0.8	0.9	1.4	1.1	1.2	0.9	0.7	1.1	0.9
29	1.4	1.0	4.4 s	0.8	1.2	1.2	1.0	1.6	0.9	0.9	1.1 s	1.3
30	1.5		1.1 s	1.0	1.4	1.0	1.2	1.3	1.3	1.3	1.4	1.4
31	1.1 s		1.6 s		1.0		1.1	1.6		1.5		1.6

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q--Factors giving amplitude of S_q on individual days, 1905-1942, in terms of the 12-year means, 1922-1933--Concluded

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Compiled from Huancayo data for month											
	Year 1941											
1	1.1	1.7	2.8 s	1.2	1.5	0.9	1.2	1.0	1.3	1.1	0.7	0.4 s
2	1.0	2.0	1.4	1.0	1.0	1.2	0.7	0.8	0.8	0.9	1.4	0.5
3	1.4	1.6	1.6	0.8	0.9	1.1	1.6	0.8	1.1	0.9	1.4	1.6
4	1.1	0.9	1.0	1.2	1.0	1.4	1.7	1.1 s	1.1	1.4	1.3	1.2
5	1.2	1.0	1.1	1.0	1.0	1.4	... s	0.6	0.9	1.2	1.5	1.6
6	1.3	0.7	1.0	0.8	0.8	0.7	1.1 s	1.2	0.9	1.2	1.5	1.5
7	1.5	0.5	0.9	1.0	0.9	0.7	1.2 s	1.2	0.8	1.2	1.7	1.5
8	1.3	0.8	0.9	0.6	1.6	0.8	1.2	1.3	1.2	1.5	1.0	1.3
9	0.7	0.8	1.3	0.5	1.1	1.2	1.6	1.4	0.9	1.5	1.0	1.3
10	0.7	1.0	0.9	1.2	1.1	1.9	1.4	1.2	0.7	1.9	1.4	1.2
11	0.8	1.4	1.3	0.8	1.4	1.6	1.2	0.9	0.9	2.0 s	1.1	0.7
12	0.8	1.2	1.1	1.0	1.6	1.5	1.1	0.9	1.0	1.3	0.8	1.0
13	1.2	1.3	1.2	1.0	1.3	1.8 s	1.1	1.0	0.7	1.2	0.6	0.8
14	0.9	1.6	1.2 s	1.1	1.3	1.1	1.2	1.4	0.8	1.2	0.7	1.0
15	1.4	...	1.5	1.3	1.2	1.1	1.3	0.6	1.0	0.9	0.8	1.1
16	1.3	1.7	1.7	1.1	0.9	1.0	1.5	1.4	1.1	1.0	1.0	1.2
17	1.9 s	1.4	1.5	1.2	0.9	1.4	1.3	0.8	0.9	0.8	1.4	1.6
18	1.4	1.1	1.5	0.7	1.1	1.0	1.4	1.1	1.6 s	0.9	1.3	1.3
19	1.5	0.8	1.3	0.6	0.9	1.2	0.9	0.9	0.6 s	1.1	1.8	1.0
20	1.3	0.9	0.9	0.7	0.8	0.9	1.5	0.8	1.3	1.1	1.5	1.3
21	1.1	0.6	1.2	0.8	1.8	0.9	1.5	1.4	1.5	1.3	1.9	1.0
22	1.4	1.1 s	1.2	0.9	1.0	1.4	1.1	1.4	1.5	1.8 s	1.9	1.4
23	0.4	1.4	1.0	0.9	1.0	0.9	1.3	1.3	1.3	1.0	1.5	1.3
24	0.7	1.3	0.9	0.7 s	0.9	1.7	1.6	1.3	1.7	1.1	1.6	1.1
25	1.0	1.3	1.0	0.9	0.7	1.6	0.8	1.2	1.1	1.4	1.8	1.2
26	1.0	1.3	1.3	0.6	1.0	1.4	1.6	1.3	1.4	1.7	1.1	0.9
27	1.0	2.4	1.2	1.0	0.8	1.5	1.5	1.5 s	1.1	0.9	1.1	1.1
28	1.3	1.5	1.0 s	1.3	0.9	1.5	1.7	2.1	1.3	0.7	1.4 s	0.7
29	1.3		1.1 s	0.9	0.7	1.6	1.6	1.4	0.9	0.9	1.0	0.9
30	1.3		1.8 s	1.0	0.8	1.3	1.3	1.2	1.0	0.7	0.6	0.5
31	1.2		1.3 s		0.7		1.4	1.2		1.3 s		0.9

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Compiled from Huancayo data for month											
	Year 1942											
1	0.8	1.1	0.4 s	0.9	1.3	1.6	1.3	0.9	0.6	1.2	0.8	0.7
2	0.6	1.1	1.2 s	0.8	1.6	1.2	1.0	1.2	0.8	0.9 s	1.4	0.5
3	1.2	1.0	1.0	0.9	1.5	1.0	1.1	1.0	1.0	0.9 s	0.6	0.8
4	1.1	1.2	1.3	1.2 s	1.8	0.9	0.8	1.0	1.0	0.6	1.0	0.5
5	1.5	1.1	1.8 s	0.9	0.9	1.0	1.1	0.5	0.8	0.7	1.2	0.5
6	1.4	1.8	1.3	0.8	0.9	0.8	0.7	0.9	0.6	0.8	0.9	1.2
7	0.6	1.6	1.3	0.7	0.8	0.7	1.1	0.9	0.9	0.7	0.8	1.0
8	1.1	1.9	1.4	0.9	1.3	0.8	0.9	0.9	0.5	0.9	1.2	0.9
9	1.1	1.5	0.9	0.7	0.6	0.7	0.8	0.6	0.9	1.1	1.3	1.1
10	1.4	1.2	1.0	0.9	0.8	0.8	0.9	1.2	0.9	1.4	1.6	1.0
11	1.7	1.2	0.6	0.3	0.9	1.0	0.7 s	0.8	1.2	1.4	1.2	0.8
12	1.4	0.8	1.1	0.7	1.5	0.9	0.9	0.8	0.9 s	1.4	1.0	0.9
13	1.6	0.7	1.1	1.0	1.3	1.1	1.0	0.9	1.3	1.5	1.0	0.9
14	1.0	0.6	0.6	1.2	1.2 s	1.1	1.2	0.9	1.2	0.9	0.9	0.7
15	0.5	1.0	0.8	1.0	1.4	1.2	1.2	1.4	0.9	1.2	0.9	0.9
16	1.1	0.9	1.1	1.2	1.5	1.2	1.2	1.1	0.9	1.1	0.6	0.5
17	1.2	1.6	1.6	1.0	1.2	1.1	0.6	0.5	1.0	1.0	0.7	0.8
18	1.3	1.7	1.7	0.9	1.1	1.0	0.9	1.3	0.9	1.0	0.9	0.7
19	1.4	1.5	1.6	1.4	1.5	1.0	0.5	0.9	0.9	0.4	1.0	0.6
20	1.5	1.4	1.4	1.2	1.8	0.7	1.3	1.2	0.7	0.7	0.7	1.3
21	1.9	1.3	1.5	1.0	1.1	0.6	0.9	0.9	0.7	1.2	1.0	0.8
22	1.0	0.9	1.4	0.7	0.9	0.7	0.9	1.0	1.3	1.3	0.7	0.9
23	1.1	1.6 s	1.2	0.9	1.0	1.1	1.0	1.0	1.0	1.0	1.5	0.5
24	1.0	1.2	1.1	1.0	1.0	0.9	0.9	1.0	1.2	0.8	0.6 s	0.8
25	1.3	1.5	1.2	0.8	0.9	0.7	1.3	0.9	1.2	0.6	1.3	1.1
26	0.9	1.2	1.5 s	0.7	0.9	0.6	1.1	0.8	0.8	1.0	1.4	0.9
27	0.6	1.3	1.0	1.1	1.2	1.0	1.2	1.3	1.0	1.2	1.3	1.1
28	0.6	2.1	1.0	0.9	0.6	0.7	1.5	1.1	1.3	1.8 s	1.7	1.0
29	1.1		1.1	1.0	0.8	0.8	1.6	1.0	1.3	1.5 s	1.2	1.2
30	1.0		0.9	0.8	0.7	0.8	2.1	1.7	1.3	0.8	0.9	0.5
31	0.7		1.1		0.9		1.4	0.3		0.6		0.8

s = storm; v = value deduced from Batavia Observatory and reduced to observatory named; w = Vassouras substituted; x = Cheltenham substituted

Table 1-Q1--Corrections to refer to GMT of observation the factors giving amplitude of S_q on individual days, January 1, 1905-April 30, 1905, for 75° west meridian time as given in Table 1-Q

Δf_q	Correction to f_q with appropriate sign for Δf_q = (f_q for preceding day $-f_q$ for day of observation) for Greenwich mean hour of observation 05 to 17												
	05	06	07	08	09	10	11	12	13	14	15	16	17
0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0
0.7	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0
0.8	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0
0.9	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0
1.0	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0
1.1	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0
1.2	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.0
1.3	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0
1.4	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.0
1.5	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0
1.6	0.8	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.0
1.7	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.0
1.8	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.0
1.9	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.0
2.0	1.0	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.0
2.1	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.0
2.2	1.1	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.4	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.5	1.3	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
	05	04	03	02	01	24	23	22	21	20	19	18	17
Δf_q	Correction to f_q with appropriate sign for Δf_q = (f_q for following day $-f_q$ for day of observation) for Greenwich mean hour of observation 17 to 05												

Table 1-Q2--Corrections to refer to GMT of observation the factors giving amplitude of S_q on individual days, May 1, 1905-December 31, 1910, for 195° east meridian time as given in Table 1-Q

Δf_q	Correction to f_q with appropriate sign for Δf_q = (f_q for preceding day $-f_q$ for day of observation) for Greenwich mean hour of observation 11 to 23												
	11	12	13	14	15	16	17	18	19	20	21	22	23
0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0
0.7	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0
0.8	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0
0.9	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0
1.0	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0
1.1	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0
1.2	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.0
1.3	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0
1.4	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.0
1.5	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0
1.6	0.8	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.0
1.7	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.0
1.8	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.0
1.9	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.0
2.0	1.0	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.0
2.1	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.0
2.2	1.1	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.4	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.5	1.3	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
	11	10	09	08	07	06	05	04	03	02	01	00	23
Δf_q	Correction to f_q with appropriate sign for Δf_q = (f_q for following day $-f_q$ for day of observation) for Greenwich mean hour of observation 23 to 11												

Table 1-Q3--Corrections to refer to GMT of observation the factors giving amplitude of S_q on individual days, January 1, 1911-April 30, 1922, for 120° east meridian time as given in Table 1-Q

Δf_q	Correction to f_q with appropriate sign for Δf_q = (f_q for preceding day $-f_q$ for day of observation) for Greenwich mean hour of observation 16 to 04												
	16	17	18	19	20	21	22	23	00	01	02	03	04
0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0
0.7	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0
0.8	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0
0.9	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0
1.0	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0
1.1	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0
1.2	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.0
1.3	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0
1.4	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.0
1.5	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0
1.6	0.8	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.0
1.7	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.0
1.8	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.0
1.9	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.0
2.0	1.0	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.0
2.1	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.0
2.2	1.1	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.4	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
2.5	1.3	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
	16	15	14	13	12	11	10	09	08	07	06	05	04
Δf_q	Correction to f_q with appropriate sign for Δf_q = (f_q for following day $-f_q$ for day of observation) for Greenwich mean hour of observation 04 to 16												

Table 1-R--Coefficients*A_H and B_H in various geographic latitudes ϕ and east longitudes λ, for conversion-formula $\Delta H = A_H \Delta X' + B\ \Delta Y'$, where $A_H = \cos(D - \Psi)$, $B_H = \sin(D - \Psi)$ for epoch 1935

Long. east of Gr., λ	Geographic latitude ϕ in degrees													
	+70		+60		+50		+40		+30		+20		+10	
	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H
°														
0	.947	.322	.984	.177	.993	.120	.996	.085	.998	.062	.999	.038	1.000	-.003
10	.913	.409	.961	.275	.979	.203	.988	.158	.991	.131	.994	.107	.997	.073
20	.866	.500	.932	.362	.961	.277	.976	.216	.983	.182	.988	.155	.992	.126
30	.826	.564	.905	.425	.945	.328	.965	.263	.975	.222	.981	.192	.986	.164
40	.788	.615	.888	.460	.935	.354	.957	.290	.971	.240	.978	.208	.983	.184
50	.770	.638	.879	.477	.934	.358	.957	.291	.971	.238	.980	.201	.985	.173
60	.761	.649	.879	.477	.940	.342	.963	.271	.976	.218	.985	.174	.990	.140
70	.771	.637	.895	.446	.951	.308	.972	.234	.985	.171	.991	.131	.996	.089
80	.827	.562	.924	.382	.967	.256	.983	.185	.992	.122	.996	.084	.999	.050
90	.902	.432	.960	.278	.984	.178	.994	.114	.997	.074	.999	.048	.999	.035
100	.961	.275	.989	.146	.998	.069	.999	.038	1.000	.010	1.000	.028	1.000	.030
110	.994	.107	1.000	-.011	.998	-.059	.999	-.049	1.000	-.030	1.000	.001	1.000	.023
120	.999	.052	.983	-.183	.984	-.176	.991	-.132	.996	-.091	.999	-.043	1.000	-.006
130	.974	-.229	.947	-.322	.964	-.266	.980	-.201	.990	-.140	.997	-.082	.999	-.040
140	.948	-.319	.926	-.377	.954	-.300	.973	-.232	.986	-.166	.994	-.106	.998	-.062
150	.937	-.350	.935	-.355	.955	-.295	.975	-.222	.987	-.158	.994	-.105	.998	-.062
160	.936	-.353	.948	-.318	.964	-.264	.983	-.183	.992	-.128	.997	-.080	.999	-.048
170	.950	-.313	.967	-.255	.980	-.200	.990	-.143	.995	-.097	.999	-.048	1.000	-.030
180	.967	-.256	.983	-.186	.991	-.132	.996	-.084	.999	-.049	1.000	-.028	1.000	-.024
190	.986	-.166	.994	-.105	.998	-.065	.999	-.035	1.000	-.022	1.000	-.023	.999	-.038
200	.996	-.088	1.000	-.024	1.000	.000	1.000	.009	1.000	-.006	1.000	-.027	.999	-.047
210	1.000	.018	.999	.050	.998	.059	.999	.044	1.000	.014	1.000	-.021	.999	-.046
220	.993	.121	.992	.128	.994	.107	.997	.076	.999	.035	1.000	-.007	.999	-.038
230	.952	.305	.978	.209	.990	.142	.995	.096	.999	.052	1.000	.010	1.000	-.019
240	.891	.455	.973	.229	.989	.146	.995	.100	.998	.061	1.000	.027	1.000	.007
250	.865	.502	.985	.170	.993	.120	.996	.087	.998	.063	.999	.038	1.000	.031
260	.958	.286	1.000	.006	.999	.037	.999	.043	.999	.051	.999	.045	.999	.051
270	-.084	-.996	.951	-.310	.992	-.124	.999	-.043	1.000	.016	1.000	.033	.999	.053
280	-.041	-.999	.816	-.578	.953	-.304	.990	-.144	.999	-.053	1.000	.006	.999	.054
290	.228	-.974	.745	-.667	.908	-.419	.984	-.179	.991	-.133	.998	-.064	1.000	-.014
300	.591	-.806	.782	-.623	.893	-.450	.950	-.312	.977	-.211	.990	-.141	.996	-.095
310	.844	-.537	.855	-.519	.914	-.405	.948	-.319	.966	-.257	.977	-.213	.986	-.168
320	.943	-.333	.929	-.370	.951	-.310	.962	-.274	.968	-.252	.973	-.231	.976	-.220
330	.997	-.073	.975	-.222	.977	-.212	.981	-.192	.983	-.183	.981	-.194	.985	-.175
340	.997	.079	.997	-.078	.995	-.096	.995	-.097	.994	-.104	.991	-.134	.985	-.174
350	.977	.214	.998	.066	1.000	.021	1.000	.000	1.000	-.018	.999	-.047	.996	-.090
360	.947	.322	.984	.177	.993	.120	.996	.085	.998	.062	.999	.038	1.000	-.003

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* Based on U. S. Hydrographic Office charts, epoch 1935. The listed values will in general include at least two significant figures for all epochs, 1905-1965, except near the magnetic poles where the secular change in D tends to infinity.

Table 1-R--Coefficients*A_H and B_H in various geographic latitudes ϕ and east longitudes λ, for conversion-formula $\Delta H = A_H \Delta X' + B_H \Delta Y'$, where $A_H = \cos(D - \Psi)$, $B_H = \sin(D - \Psi)$ for epoch 1935--Concluded

Long. east of Gr., λ	Geographic latitude ϕ in degrees													
	0		-10		-20		-30		-40		-50		-60	
	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H	A_H	B_H
0°	.998	-.071	.989	-.150	.973	-.229	.961	-.276	.965	-.264	.983	-.183	.998	-.065
10	1.000	.017	.998	-.063	.988	-.151	.976	-.218	.967	-.254	.982	-.190	.996	-.088
20	.997	.082	1.000	.018	.997	-.076	.990	-.145	.981	-.194	.980	-.200	.995	-.102
30	.991	.132	.997	.081	1.000	.004	.997	-.082	.987	-.161	.980	-.200	.993	-.115
40	.988	.152	.993	.118	.999	.048	.998	-.061	.986	-.167	.977	-.214	.985	-.173
50	.990	.143	.995	.104	1.000	.027	.996	-.095	.979	-.205	.962	-.274	.965	-.262
60	.995	.104	.999	.046	.999	-.051	.985	-.171	.960	-.278	.933	-.360	.932	-.363
70	.999	.043	1.000	-.028	.991	-.133	.967	-.256	.930	-.367	.892	-.452	.885	-.465
80	1.000	.008	.998	-.056	.986	-.168	.953	-.303	.901	-.435	.845	-.535	.822	-.569
90	1.000	.007	.999	-.041	.991	-.136	.960	-.279	.899	-.438	.812	-.583	.758	-.652
100	1.000	.024	1.000	-.009	.997	-.080	.979	-.202	.922	-.387	.809	-.588	.695	-.719
110	1.000	.030	1.000	.011	.999	-.036	.992	-.126	.959	-.282	.846	-.534	.639	-.769
120	1.000	.012	1.000	.006	1.000	-.020	.997	-.080	.983	-.184	.920	-.393	.649	-.761
130	1.000	-.010	1.000	-.007	1.000	-.016	.999	-.044	.994	-.106	.974	-.227	.807	-.591
140	1.000	-.028	1.000	-.017	1.000	-.016	1.000	-.023	.999	-.046	.993	-.119	.957	-.290
150	.999	-.033	1.000	-.020	1.000	-.011	1.000	-.006	1.000	-.007	1.000	-.022	.997	-.077
160	1.000	-.030	1.000	-.017	1.000	-.008	1.000	.003	1.000	.018	1.000	.029	1.000	.010
170	1.000	-.023	1.000	-.015	1.000	-.007	1.000	.014	.999	.038	.998	.055	.998	.062
180	1.000	-.024	1.000	-.020	1.000	-.004	1.000	.020	.999	.047	.998	.065	.995	.099
190	.999	-.040	1.000	-.029	1.000	-.008	1.000	.020	.999	.048	.998	.071	.992	.122
200	.999	-.052	.999	-.033	1.000	-.010	1.000	.022	.999	.048	.997	.075	.990	.138
210	.999	-.050	1.000	-.030	1.000	-.005	1.000	.029	.998	.058	.996	.089	.987	.162
220	.999	-.036	1.000	-.020	1.000	.006	.999	.043	.997	.076	.993	.119	.978	.209
230	1.000	-.020	1.000	-.002	1.000	.025	.998	.063	.994	.105	.987	.159	.965	.262
240	1.000	.005	1.000	.022	.999	.050	.996	.094	.990	.142	.978	.206	.953	.304
250	.999	.037	.998	.054	.996	.087	.991	.135	.982	.190	.966	.260	.938	.347
260	.998	.068	.996	.092	.992	.128	.983	.185	.970	.243	.951	.308	.927	.374
270	.996	.087	.993	.119	.987	.160	.976	.216	.961	.277	.944	.330	.927	.375
280	.997	.076	.994	.113	.988	.154	.977	.213	.964	.268	.949	.315	.935	.354
290	1.000	.022	.998	.060	.994	.107	.989	.150	.977	.212	.962	.271	.948	.319
300	.998	-.057	1.000	-.028	1.000	.009	.999	.047	.992	.125	.980	.200	.964	.266
310	.990	-.143	.993	-.120	.995	-.098	.999	-.046	1.000	.022	.994	.111	.977	.212
320	.979	-.206	.979	-.202	.982	-.189	.989	-.148	.997	-.076	1.000	.024	.990	.140
330	.973	-.231	.970	-.243	.970	-.242	.976	-.217	.988	-.154	.998	-.055	.997	.072
340	.976	-.219	.967	-.254	.962	-.272	.948	-.318	.977	-.215	.993	-.115	1.000	.015
350	.988	-.155	.975	-.221	.962	-.273	.958	-.286	.967	-.255	.987	-.160	.995	-.033
360	.998	-.071	.989	-.150	.973	-.229	.961	-.276	.965	-.264	.983	-.183	.998	-.065

* Based on U. S. Hydrographic Office charts, epoch 1935. The listed values will in general include at least two significant figures for all epochs, 1905-1965, except near the magnetic poles where the secular change in D tends to infinity.

Table 1-S--Coefficients* A_D and B_D in various geographic latitudes ϕ and east longitudes λ, for conversion-formula $\Delta D = A_D \Delta X' + B_D \Delta Y'$, where
$A_D = -\sin(D - \Psi)/(2.909 \times 10^{-4}\ H)$, $B_D = \cos(D - \Psi)/(2.909 \times 10^{-4}\ H)$
with ΔD in minutes of arc and $\Delta X'$ and $\Delta Y'$ in gammas
for epoch 1935

Long. east of Gr., λ	Geographic latitude in degrees													
	+70		+60		+50		+40		+30		+20		+10	
°	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D
0	-.100	.295	-.041	.228	-.022	.180	-.012	.142	-.008	.120	-.004	.110	.000	.110
10	-.126	.281	-.063	.219	-.036	.173	-.022	.138	-.016	.117	-.012	.107	-.008	.106
20	-.153	.266	-.082	.211	-.048	.167	-.030	.135	-.021	.114	-.016	.104	-.013	.103
30	-.174	.254	-.096	.206	-.056	.162	-.036	.132	-.025	.112	-.020	.101	-.017	.101
40	-.192	.246	-.105	.202	-.060	.159	-.039	.128	-.027	.109	-.021	.098	-.018	.098
50	-.204	.246	-.109	.201	-.060	.157	-.038	.126	-.026	.107	-.020	.096	-.017	.096
60	-.215	.252	-.110	.203	-.057	.157	-.035	.125	-.023	.105	-.017	.095	-.013	.093
70	-.221	.268	-.104	.208	-.051	.158	-.030	.124	-.018	.103	-.012	.093	-.008	.092
80	-.208	.306	-.090	.218	-.043	.162	-.023	.124	-.013	.102	-.008	.091	-.004	.089
90	-.174	.363	-.066	.229	-.030	.164	-.014	.123	-.007	.100	-.004	.088	-.003	.087
100	-.116	.403	-.035	.238	-.011	.164	-.004	.120	-.001	.098	-.002	.088	-.003	.086
110	-.044	.412	.003	.238	.010	.159	.006	.120	.003	.098	.000	.090	-.002	.086
120	-.020	.398	.043	.229	.027	.152	.016	.119	.009	.101	.004	.092	.001	.089
130	.086	.367	.071	.210	.040	.144	.024	.118	.015	.103	.008	.095	.004	.092
140	.111	.330	.078	.193	.044	.141	.028	.119	.018	.107	.011	.099	.006	.094
150	.112	.300	.070	.186	.043	.139	.028	.122	.018	.112	.011	.105	.006	.098
160	.105	.280	.061	.182	.038	.140	.024	.127	.015	.118	.009	.110	.005	.101
170	.090	.272	.048	.183	.030	.145	.019	.132	.012	.123	.006	.113	.003	.104
180	.073	.277	.035	.186	.020	.151	.012	.136	.006	.126	.003	.116	.003	.106
190	.050	.295	.020	.190	.010	.156	.005	.139	.003	.128	.003	.118	.004	.107
200	.028	.320	.005	.200	.000	.161	-.001	.141	.001	.129	.003	.118	.005	.107
210	-.006	.356	-.010	.202	-.010	.165	-.006	.142	-.002	.128	.002	.116	.005	.107
220	-.050	.409	-.027	.209	-.018	.171	-.011	.142	-.004	.125	.001	.114	.004	.105
230	-.157	.491	-.050	.232	-.026	.182	-.014	.143	-.006	.124	-.001	.111	.002	.104
240	-.302	.592	-.063	.268	-.029	.196	-.015	.148	-.008	.122	-.003	.110	-.001	.104
250	-.508	.874	-.055	.318	-.026	.218	-.014	.156	-.008	.123	-.004	.110	-.003	.104
260	-.643	2.153	-.002	.409	-.010	.256	-.007	.167	-.006	.127	-.005	.111	-.005	.105
270	1.639	-.138	.206	.631	.036	.284	.008	.180	-.002	.132	-.004	.114	-.006	.107
280	.756	-.031	.311	.438	.088	.274	.028	.190	.008	.141	-.001	.120	-.006	.110
290	.542	.127	.287	.320	.113	.246	.035	.192	.020	.146	.008	.127	.002	.116
300	.383	.281	.216	.271	.109	.216	.060	.182	.032	.146	.018	.128	.011	.118
310	.219	.344	.154	.254	.089	.202	.058	.171	.038	.141	.027	.125	.020	.119
320	.120	.341	.100	.251	.064	.196	.046	.162	.035	.136	.029	.122	.026	.116
330	.025	.339	.056	.247	.042	.191	.030	.156	.025	.133	.024	.120	.020	.114
340	-.026	.323	.019	.242	.018	.188	.015	.151	.014	.129	.016	.114	.020	.110
350	-.068	.309	-.016	.237	-.004	.184	.000	.148	.002	.125	.005	.112	.010	.110
360	-.100	.295	-.041	.228	-.022	.180	-.012	.142	-.008	.120	-.004	.110	.000	.110

*Based on U. S. Hydrographic Office charts, epoch 1935. The listed values will in general include at least two significant figures for all epochs, 1905-1965.

Table 1-S--Coefficients*A_D and B_D in various geographic latitudes ϕ and east longitudes λ,
for conversion-formula $\Delta D = A_D\Delta X' + B_D\Delta Y'$, where
$A_D = -\sin(D - \Psi)/(2.909 \times 10^{-4} H)$, $B_D = \cos (D - \Psi)/(2.909 \times 10^{-4} H)$
with ΔD in minutes of arc and $\Delta X'$ and $\Delta Y'$ in gammas
for epoch 1935--Concluded

Long. east of Gr., λ	Geographic latitude ϕ in degrees													
	0		-10		-20		-30		-40		-50		-60	
	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D	A_D	B_D
° 0	.009	.120	.022	.142	.039	.165	.053	.186	.053	.193	.036	.195	.013	.193
10	-.002	.120	.009	.144	.026	.173	.044	.198	.055	.209	.041	.210	.018	.206
20	-.010	.116	-.002	.143	.014	.176	.031	.213	.046	.231	.046	.224	.022	.216
30	-.015	.112	-.011	.139	-.001	.176	.018	.219	.040	.242	.048	.235	.026	.221
40	-.017	.108	-.016	.134	-.008	.172	.013	.216	.041	.242	.051	.231	.039	.221
50	-.015	.105	-.013	.128	-.004	.161	.020	.204	.046	.221	.062	.217	.059	.216
60	-.011	.102	-.006	.123	.008	.152	.032	.186	.060	.207	.079	.205	.081	.208
70	-.004	.099	.003	.116	.019	.143	.045	.171	.073	.186	.098	.193	.106	.201
80	-.001	.095	.006	.111	.023	.133	.050	.158	.084	.174	.116	.184	.137	.198
90	-.001	.092	.004	.106	.017	.126	.044	.153	.084	.173	.132	.183	.166	.193
100	-.002	.090	.001	.102	.010	.120	.030	.148	.074	.177	.143	.197	.206	.199
110	-.003	.088	-.001	.098	.004	.115	.018	.141	.054	.182	.144	.228	.269	.223
120	-.001	.088	-.001	.096	.002	.110	.011	.135	.034	.183	.110	.258	.320	.273
130	.001	.091	.001	.095	.002	.105	.006	.130	.019	.178	.062	.268	.297	.406
140	.003	.093	.002	.094	.002	.103	.003	.126	.008	.170	.031	.257	.142	.467
150	.003	.094	.002	.095	.001	.103	.001	.122	.001	.160	.005	.236	.031	.408
160	.003	.095	.002	.096	.001	.103	.000	.120	-.003	.152	-.006	.213	-.003	.345
170	.002	.097	.002	.096	.001	.103	-.002	.118	-.006	.145	-.010	.191	-.019	.300
180	.002	.098	.002	.097	.000	.103	-.002	.116	-.007	.140	-.012	.179	-.026	.262
190	.004	.098	.003	.098	.001	.103	-.002	.115	-.006	.136	-.012	.170	-.029	.236
200	.005	.100	.003	.098	.001	.105	-.002	.115	-.006	.132	-.012	.163	-.030	.211
210	.005	.100	.003	.101	.000	.106	-.003	.114	-.008	.130	-.014	.155	-.033	.201
220	.004	.101	.002	.102	-.001	.108	-.005	.114	-.010	.127	-.018	.147	-.040	.187
230	.002	.101	.000	.104	-.003	.109	-.007	.115	-.013	.125	-.023	.141	-.046	.170
240	.000	.102	-.002	.106	-.006	.110	-.011	.116	-.018	.123	-.029	.136	-.051	.159
250	-.004	.103	-.006	.107	-.010	.112	-.016	.117	-.024	.122	-.035	.131	-.053	.144
260	-.007	.104	-.010	.108	-.015	.114	-.022	.119	-.030	.121	-.041	.125	-.055	.136
270	-.009	.106	-.013	.110	-.019	.116	-.027	.121	-.035	.121	-.043	.122	-.053	.131
280	-.008	.108	-.013	.113	-.019	.120	-.027	.124	-.035	.126	-.041	.123	-.048	.128
290	-.002	.114	-.007	.118	-.014	.126	-.020	.133	-.029	.135	-.036	.127	-.043	.128
300	.007	.117	.004	.123	-.001	.132	-.007	.141	-.018	.144	-.028	.135	-.037	.132
310	.017	.118	.015	.125	.013	.136	.007	.150	-.003	.152	-.016	.141	-.030	.138
320	.025	.118	.026	.127	.027	.141	.023	.155	.012	.158	-.004	.148	-.020	.145
330	.028	.117	.032	.129	.036	.145	.035	.159	.025	.162	.008	.156	-.011	.157
340	.026	.117	.035	.133	.042	.150	.054	.161	.037	.170	.019	.167	-.003	.167
350	.019	.119	.031	.137	.044	.155	.052	.172	.047	.180	.029	.180	.006	.178
360	.009	.120	.022	.142	.039	.165	.053	.186	.053	.193	.036	.195	.013	.193

*Based on U. S. Hydrographic Office charts, epoch 1935. The listed values will in general include at least two significant figures for all epochs, 1905-1965.

Table 1-T--Coefficients* A_I and B_I in various geographic latitudes ϕ and east longitudes λ,
for conversion-formula $\Delta I = A_I \Delta H + B_I \Delta Z$, where
$A_I = (-1719 \sin 2I)/H$, $B_I = [1719(1 + \cos 2I)]/H$,
with ΔI in minutes of arc and ΔH and ΔZ in gammas
for epoch 1935

Long. east of Gr., λ	Geographic latitude ϕ in degrees													
	+70		+60		+50		+40		+30		+20		+10	
	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I
° 0	-.067	.015	-.068	.022	-.069	.032	-.066	.044	-.060	.066	-.042	.091	-.003	.110
10	-.067	.016	-.068	.022	-.068	.032	-.066	.046	-.058	.067	-.038	.092	.000	.107
20	-.067	.016	-.068	.022	-.067	.032	-.065	.045	-.058	.066	-.037	.090	.001	.104
30	-.066	.015	-.067	.022	-.066	.031	-.064	.044	-.057	.064	-.037	.088	.000	.103
40	-.066	.015	-.065	.020	-.064	.030	-.062	.042	-.056	.060	-.036	.084	-.002	.100
50	-.065	.014	-.063	.019	-.063	.028	-.060	.040	-.055	.058	-.038	.081	-.007	.097
60	-.064	.013	-.061	.018	-.061	.027	-.059	.038	-.054	.055	-.039	.076	-.009	.094
70	-.063	.012	-.061	.017	-.060	.025	-.058	.037	-.053	.053	-.039	.073	-.008	.091
80	-.056	.009	-.060	.016	-.058	.023	-.057	.036	-.051	.052	-.037	.072	-.006	.088
90	-.065	.011	-.060	.016	-.056	.022	-.056	.034	-.050	.050	-.035	.071	-.005	.087
100	-.066	.011	-.059	.016	-.054	.020	-.054	.034	-.049	.050	-.035	.071	-.004	.086
110	-.066	.011	-.058	.015	-.053	.020	-.054	.034	-.049	.051	-.036	.072	-.005	.086
120	-.065	.011	-.058	.016	-.053	.021	-.055	.036	-.051	.053	-.037	.074	-.009	.088
130	-.062	.011	-.057	.016	-.054	.023	-.056	.038	-.052	.057	-.037	.077	-.010	.091
140	-.062	.011	-.056	.016	-.057	.027	-.058	.042	-.054	.062	-.039	.081	-.011	.093
150	-.059	.011	-.056	.018	-.059	.030	-.060	.047	-.056	.066	-.040	.086	-.013	.096
160	-.057	.011	-.057	.019	-.061	.032	-.063	.050	-.059	.068	-.043	.089	-.016	.098
170	-.056	.012	-.059	.021	-.062	.034	-.065	.051	-.061	.068	-.048	.088	-.021	.099
180	-.057	.012	-.060	.021	-.064	.035	-.066	.050	-.063	.066	-.052	.084	-.028	.098
190	-.058	.012	-.059	.021	-.065	.034	-.066	.048	-.064	.063	-.055	.080	-.032	.097
200	-.059	.011	-.059	.019	-.064	.032	-.065	.044	-.064	.059	-.057	.077	-.036	.093
210	-.057	.009	-.056	.017	-.062	.028	-.063	.039	-.063	.054	-.056	.072	-.038	.091
220	-.057	.008	-.052	.014	-.060	.024	-.061	.034	-.061	.049	-.055	.068	-.038	.089
230	-.056	.006	-.050	.011	-.059	.021	-.059	.030	-.059	.045	-.055	.064	-.040	.086
240	-.058	.005	-.048	.009	-.056	.018	-.057	.027	-.058	.041	-.055	.059	-.042	.083
250	-.060	.004	-.047	.007	-.054	.014	-.056	.023	-.056	.036	-.055	.054	-.044	.080
260	-.060	.002	-.046	.005	-.053	.012	-.054	.020	-.055	.032	-.055	.049	-.048	.074
270	-.034	.001	-.062	.006	-.054	.011	-.055	.018	-.055	.029	-.056	.046	-.051	.069
280	-.041	.002	-.060	.007	-.055	.011	-.056	.018	-.056	.028	-.057	.044	-.054	.065
290	-.049	.004	-.062	.009	-.058	.013	-.059	.019	-.058	.029	-.060	.043	-.057	.064
300	-.058	.007	-.061	.011	-.060	.016	-.061	.022	-.061	.031	-.062	.045	-.059	.066
310	-.062	.010	-.062	.014	-.061	.019	-.064	.027	-.063	.036	-.063	.050	-.059	.070
320	-.063	.011	-.063	.015	-.063	.022	-.065	.031	-.065	.043	-.063	.059	-.056	.080
330	-.066	.013	-.064	.018	-.066	.026	-.066	.036	-.065	.050	-.061	.069	-.047	.093
340	-.066	.014	-.065	.019	-.068	.029	-.066	.039	-.064	.056	-.054	.078	-.032	.102
350	-.067	.015	-.067	.021	-.068	.030	-.067	.043	-.062	.062	-.048	.085	-.014	.108
360	-.067	.015	-.068	.022	-.069	.032	-.066	.044	-.060	.066	-.042	.091	-.003	.110

* Based on U. S. Hydrographic Office charts, epoch 1935. The listed values will in general include at least two significant figures for all epoch, 1905-1965.

Table 1-T--Coefficients* A_I and B_I in various geographic latitudes ϕ and east longitudes λ, for conversion-formula $\Delta I = A_I\,\Delta H + B_I\Delta Z$, where $A_I = (-1719 \sin 2I)/H$, $B_I = [1719(1 + \cos 2I)]/H$, with ΔI in minutes of arc and ΔH and ΔZ in gammas for epoch 1935--Concluded

Long. east of Gr., λ	Geographic latitude φ in degrees													
	0		-10		-20		-30		-40		-50		-60	
	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I	A_I	B_I
° 0	.038	.107	.068	.092	.084	.078	.093	.070	.090	.057	.084	.046	.077	.038
10	.045	.100	.071	.082	.085	.068	.091	.056	.090	.048	.083	.039	.077	.034
20	.044	.097	.071	.078	.084	.061	.090	.049	.090	.042	.083	.036	.077	.032
30	.042	.094	.070	.075	.082	.056	.090	.046	.091	.040	.086	.036	.076	.030
40	.039	.093	.067	.075	.080	.056	.089	.046	.091	.040	.084	.035	.076	.029
50	.034	.094	.063	.077	.077	.058	.086	.048	.085	.039	.080	.033	.074	.028
60	.030	.093	.059	.078	.074	.058	.081	.046	.083	.039	.076	.030	.071	.026
70	.029	.090	.056	.075	.070	.057	.076	.043	.076	.034	.072	.027	.068	.023
80	.030	.085	.054	.069	.066	.052	.071	.040	.070	.030	.068	.024	.066	.020
90	.029	.081	.052	.064	.062	.048	.067	.036	.066	.026	.064	.020	.061	.015
100	.028	.080	.050	.060	.058	.044	.061	.031	.060	.021	.060	.016	.055	.011
110	.026	.079	.048	.060	.056	.042	.056	.027	.058	.020	.061	.014	.054	.009
120	.024	.081	.045	.063	.054	.043	.055	.028	.057	.019	.060	.014	.053	.007
130	.022	.085	.044	.065	.052	.044	.054	.029	.056	.019	.057	.012	.056	.006
140	.021	.088	.043	.067	.051	.045	.053	.030	.054	.020	.055	.012	.055	.006
150	.020	.090	.042	.070	.051	.048	.053	.031	.054	.021	.054	.013	.051	.006
160	.018	.092	.041	.072	.052	.050	.054	.033	.054	.023	.054	.014	.049	.007
170	.013	.095	.039	.076	.051	.054	.054	.036	.054	.025	.053	.016	.048	.008
180	.007	.097	.037	.081	.051	.058	.055	.039	.055	.027	.054	.018	.048	.009
190	.000	.099	.033	.085	.051	.063	.056	.043	.056	.029	.054	.019	.051	.011
200	-.003	.100	.031	.087	.050	.068	.056	.047	.056	.032	.056	.022	.052	.013
210	-.005	.100	.030	.091	.050	.072	.057	.050	.058	.035	.057	.025	.054	.016
220	-.007	.100	.028	.094	.050	.075	.057	.055	.058	.039	.058	.028	.056	.018
230	-.009	.100	.025	.097	.049	.079	.058	.058	.059	.042	.058	.030	.056	.020
240	-.013	.100	.022	.101	.048	.083	.058	.063	.060	.045	.058	.032	.058	.023
250	-.017	.101	.018	.104	.046	.089	.058	.068	.061	.050	.060	.036	.057	.026
260	-.023	.099	.011	.108	.042	.096	.058	.076	.062	.056	.061	.041	.058	.028
270	-.031	.096	-.003	.111	.036	.105	.057	.086	.063	.066	.063	.048	.060	.034
280	-.037	.093	-.008	.113	.029	.115	.054	.098	.064	.076	.065	.057	.062	.040
290	-.044	.093	-.018	.116	.022	.123	.050	.113	.066	.090	.066	.065	.064	.044
300	-.048	.093	-.022	.119	.018	.130	.049	.121	.067	.101	.069	.072	.066	.048
310	-.046	.097	-.019	.123	.024	.132	.055	.126	.071	.104	.071	.074	.068	.050
320	-.037	.107	-.003	.130	.036	.133	.064	.123	.076	.100	.074	.072	.070	.052
330	-.019	.117	.018	.130	.054	.126	.075	.112	.081	.090	.077	.066	.074	.052
340	-.004	.120	.044	.122	.070	.112	.084	.096	.086	.078	.081	.060	.075	.047
350	-.024	.116	.060	.108	.080	.092	.090	.082	.090	068	.083	.053	.076	.042
360	-.038	.107	.068	.092	.084	.078	.093	.070	.090	.057	.084	.046	.077	.038

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* Based on U. S. Hydrographic Office charts, epoch 1935. The listed values will in general include at least two significant figures for all epochs, 1905-1965.

Table 1-U--International daily magnetic character-figures C, 1905-1942

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1905											
1	0.3	0.8	0.7	1.9	0.8	0.3	0.7	0.3	0.7	0.7	0.1	0.1
2	0.2	1.0	2.0	1.1	0.6	0.4	0.1	1.8	0.5	0.1	0.1	0.7
3	0.3	2.0	1.0	0.9	0.5	0.6	0.2	1.2	1.7	0.1	0.2	0.7
4	1.0	1.5	0.8	0.8	0.3	0.7	0.1	0.8	1.1	0.3	1.0	1.5
5	1.9	1.5	1.3	0.9	0.1	1.2	0.7	0.5	1.0	0.6	0.7	0.7
6	1.0	0.7	0.8	0.8	0.1	1.0	1.5	0.6	0.2	1.3	0.7	0.3
7	0.5	0.7	1.7	0.5	0.2	0.4	1.0	1.3	0.3	0.8	0.7	0.2
8	0.2	0.5	0.9	0.2	0.4	0.6	0.9	0.6	0.6	0.7	0.5	0.2
9	0.2	0.5	0.5	0.2	0.3	1.3	0.8	0.2	0.7	0.4	0.4	0.1
10	0.7	0.7	0.5	0.1	0.3	1.4	0.3	0.1	0.8	0.5	0.5	0.1
11	0.8	0.2	0.3	0.1	0.2	1.0	0.1	0.6	0.5	0.5	0.2	0.1
12	0.7	0.5	0.5	0.7	0.7	0.4	0.4	0.6	0.4	0.5	2.0	1.1
13	0.3	0.5	0.5	0.3	0.6	0.1	0.8	0.8	0.2	1.0	1.5	1.2
14	1.1	1.3	0.7	0.7	0.2	0.3	0.4	0.7	0.2	0.7	1.0	0.6
15	0.7	0.8	1.0	0.7	0.1	0.7	0.1	0.2	0.3	0.1	2.0	0.3
16	0.2	0.8	1.0	0.3	0.2	0.3	0.1	0.8	0.1	0.2	2.0	0.2
17	1.2	0.6	0.3	0.1	0.6	0.3	0.3	0.4	0.1	0.7	1.0	0.2
18	0.6	0.3	0.2	0.0	0.7	0.1	0.3	0.3	1.5	0.8	0.6	0.4
19	0.4	0.1	0.4	0.2	0.8	0.0	0.4	0.5	1.4	0.1	0.5	0.6
20	0.8	0.3	0.3	0.7	0.4	0.2	0.1	0.7	0.6	0.4	0.2	1.0
21	0.7	0.6	0.2	0.9	0.2	0.6	0.2	0.3	0.6	0.3	0.6	0.4
22	1.2	0.8	0.3	0.2	0.4	1.0	0.3	0.5	0.7	0.2	0.4	0.1
23	0.3	1.3	0.5	0.1	0.6	1.4	1.3	0.6	0.3	0.1	0.6	0.0
24	0.9	0.7	0.3	0.0	0.5	0.7	1.4	0.5	0.4	0.4	0.7	0.1
25	0.8	0.7	0.2	0.2	0.3	0.3	0.5	0.7	0.8	0.5	0.3	0.3
26	0.5	0.7	0.2	0.9	0.6	0.3	0.1	0.5	0.9	0.8	0.5	0.2
27	0.4	0.5	0.8	0.7	1.1	0.2	0.4	0.8	1.2	0.3	0.7	0.1
28	0.7	0.1	0.1	0.4	0.7	0.1	0.7	0.9	0.7	1.5	0.5	0.5
29	1.0		0.6	0.9	0.8	0.3	0.2	1.2	0.4	0.0	0.2	0.7
30	0.3		0.6	0.8	0.6	0.6	0.2	1.2	1.0	0.1	0.2	0.4
31	1.2		0.5		0.6		0.1	1.1		0.0		0.1

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1906											
1	0.1	1.2	1.2	0.2	0.3	1.3	0.8	0.6	0.9	1.2	0.4	0.3
2	0.4	0.8	0.4	0.8	0.3	1.5	0.7	0.4	1.0	0.9	0.0	0.8
3	0.3	0.8	0.4	1.0	0.1	1.1	0.4	0.5	1.2	0.9	0.1	0.7
4	0.4	0.9	1.5	0.8	0.1	1.0	0.4	0.2	1.5	0.6	0.5	0.3
5	0.3	0.7	1.1	0.1	0.1	0.5	0.9	0.0	1.0	0.6	0.7	0.1
6	0.6	1.2	0.8	0.0	0.7	0.3	1.0	0.1	0.7	0.2	0.4	0.3
7	0.2	0.9	1.2	0.0	0.4	0.7	0.2	1.5	0.4	0.1	0.5	0.6
8	0.8	0.7	1.2	0.7	1.3	1.0	0.2	1.7	0.1	0.1	1.0	1.6
9	0.8	0.8	1.1	1.1	1.0	0.7	0.3	1.0	0.1	0.1	0.5	1.6
10	0.2	0.9	0.9	1.2	0.3	0.4	0.9	0.6	0.1	0.3	1.0	0.4
11	0.4	0.6	0.4	1.0	0.8	0.8	1.8	0.5	0.2	0.4	1.0	0.4
12	0.6	0.4	0.9	0.3	0.4	0.3	1.3	1.3	0.5	1.0	0.5	0.5
13	0.8	0.0	1.0	0.6	0.7	0.7	1.0	1.2	0.4	0.9	0.7	0.3
14	0.9	0.6	1.0	0.5	1.1	0.3	0.5	0.7	0.6	0.6	0.2	0.4
15	0.8	1.4	0.4	0.1	1.6	0.9	0.2	0.4	0.9	0.4	0.5	1.0
16	0.3	1.1	0.3	0.1	0.5	1.0	0.1	0.7	1.0	0.5	0.3	1.7
17	0.1	0.5	0.9	0.5	0.3	0.7	0.1	0.2	0.8	0.2	0.5	1.3
18	0.1	0.6	1.0	0.4	0.4	0.4	0.3	0.0	0.7	0.0	0.9	0.3
19	0.7	1.7	0.0	0.5	0.8	0.0	0.3	0.6	0.3	0.8	0.9	0.3
20	0.1	0.4	0.2	0.4	1.2	0.1	0.5	0.3	0.9	0.5	0.4	0.3
21	0.8	0.5	0.1	0.7	1.0	0.1	0.9	0.5	0.8	0.9	1.3	1.1
22	0.8	0.2	0.1	0.9	0.5	0.1	0.2	0.3	1.8	1.2	1.4	2.0
23	0.1	0.8	0.1	1.1	0.2	0.1	0.9	0.2	1.7	0.8	0.3	1.4
24	0.0	1.9	1.0	1.1	0.6	0.5	0.3	0.5	1.1	0.3	0.6	1.0
25	0.0	1.7	1.3	0.9	0.5	0.7	0.6	0.8	1.0	0.3	0.8	0.2
26	0.3	1.7	0.8	0.3	0.1	0.7	0.8	0.8	1.1	0.6	0.3	0.9
27	0.7	0.8	0.5	0.2	1.0	0.2	1.0	1.1	0.6	1.2	0.3	0.7
28	0.6	1.5	0.6	1.2	0.6	0.3	0.9	0.8	0.5	0.8	0.2	0.6
29	0.1		0.6	1.4	0.4	0.2	1.2	0.7	0.7	0.5	0.2	0.2
30	0.1		0.2	0.9	0.2	0.2	1.5	0.3	1.0	0.7	0.3	0.3
31	1.6		0.1		0.1		0.8	0.9		0.4		0.3

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1907							
1	0.3	0.6	1.0	0.0	0.1	0.6	1.0	1.1	0.2	1.1	0.1	0.1
2	0.5	0.8	0.7	0.0	0.3	0.5	1.1	1.0	0.3	1.1	0.7	0.1
3	0.2	0.3	0.2	0.1	0.9	0.8	0.9	0.9	0.4	0.8	1.1	0.1
4	0.4	0.2	0.7	0.3	0.5	0.8	0.2	0.9	0.8	0.3	1.0	0.8
5	1.0	0.2	0.7	1.0	0.4	0.2	0.8	0.5	0.9	0.3	0.6	0.8
6	0.3	0.4	0.7	1.0	1.1	0.8	0.8	0.3	0.7	0.1	0.2	0.8
7	0.9	1.5	0.6	0.2	0.7	0.6	1.0	0.4	0.4	0.1	0.7	1.0
8	1.4	1.4	0.3	0.3	0.3	0.2	0.9	0.4	0.2	0.8	0.9	0.9
9	0.5	1.9	0.3	0.2	0.2	0.5	0.6	0.8	0.1	0.8	0.5	0.1
10	0.8	1.8	1.7	0.2	0.9	1.0	1.4	0.7	1.7	0.4	1.3	0.9
11	1.6	1.4	1.3	0.8	1.0	1.0	1.6	0.3	1.2	0.6	1.2	1.2
12	1.0	1.0	1.7	0.2	0.8	0.9	0.8	0.1	1.2	0.3	0.9	1.1
13	0.5	0.8	0.6	0.7	1.1	0.6	0.2	0.2	0.5	1.8	0.4	1.1
14	1.4	1.3	0.2	1.1	1.0	0.4	0.3	0.8	0.1	1.8	0.5	0.4
15	1.3	0.9	0.1	0.6	1.1	0.2	0.1	0.4	0.2	1.5	0.3	0.2
16	0.7	0.5	0.1	1.2	0.8	0.2	0.2	0.6	1.1	1.0	0.5	0.2
17	0.3	0.7	0.1	0.8	0.5	0.2	0.2	0.5	1.4	0.5	0.4	0.5
18	0.3	0.2	0.2	1.1	1.4	0.9	0.3	0.7	1.1	0.0	0.2	0.4
19	0.2	0.4	0.4	0.8	1.4	1.7	0.4	0.7	1.0	0.0	0.1	0.4
20	0.3	0.9	0.5	0.3	0.9	1.2	0.2	0.9	0.9	0.3	0.0	0.7
21	0.1	0.8	1.7	0.1	0.5	0.8	0.1	1.2	0.5	0.6	1.8	0.2
22	0.7	1.1	1.3	0.4	0.7	1.4	0.7	0.9	0.1	1.4	1.2	0.3
23	0.8	1.0	0.4	0.4	0.6	0.6	0.5	0.8	0.1	0.8	0.5	0.2
24	0.9	1.1	0.2	0.3	0.9	0.5	0.3	1.0	0.1	0.5	0.4	0.1
25	0.6	1.1	0.9	0.7	0.7	0.7	1.1	0.8	0.6	0.8	0.3	0.2
26	0.6	0.4	0.4	0.6	0.2	0.4	0.8	0.5	1.0	0.6	0.5	0.8
27	0.9	0.2	0.3	0.9	0.1	0.7	1.0	0.3	0.7	1.2	0.9	0.7
28	0.9	0.5	0.4	0.6	0.9	0.8	1.6	0.2	0.7	0.8	0.8	0.6
29	0.5		0.3	0.9	1.4	0.3	1.0	0.1	0.8	1.0	0.1	0.4
30	0.8		0.1	0.2	0.2	0.3	0.1	1.5	1.2	0.6	0.1	0.6
31	0.6		0.0		0.8		0.6	0.9		0.2		0.3

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1908							
1	0.3	0.4	1.6	0.7	1.1	0.7	0.4	0.6	0.1	1.1	1.1	0.2
2	0.8	0.2	1.3	0.3	1.2	0.4	0.1	0.6	0.2	0.4	0.8	0.2
3	0.7	1.1	1.1	0.4	0.9	1.4	0.2	0.9	0.6	0.8	0.6	0.3
4	0.7	1.1	1.3	0.3	0.9	1.1	0.2	0.3	1.2	0.9	0.1	1.4
5	0.9	1.3	0.8	0.8	0.9	0.2	0.6	0.3	1.8	1.3	0.0	1.4
6	0.6	1.4	0.7	1.2	0.6	0.9	0.8	0.4	1.0	1.2	0.1	0.9
7	0.8	1.3	0.5	1.2	0.3	0.6	0.8	1.0	0.7	0.6	0.6	0.6
8	0.9	0.7	1.3	1.0	0.6	0.5	0.2	1.3	1.1	0.2	1.8	0.4
9	1.4	0.7	1.1	0.4	0.3	0.3	0.2	1.5	1.1	0.0	1.3	0.2
10	0.7	0.9	0.8	0.2	1.0	0.1	0.1	0.6	1.2	0.1	1.1	0.3
11	0.9	1.2	0.7	0.1	1.1	0.1	0.3	1.1	1.8	0.1	0.9	0.1
12	0.7	1.1	0.5	0.2	0.8	0.8	0.7	1.6	2.0	1.3	0.6	0.4
13	0.2	0.8	0.0	0.1	1.0	0.8	0.6	1.2	0.8	1.3	0.3	0.8
14	0.3	0.2	0.1	0.6	0.8	0.5	0.3	1.0	0.5	1.0	0.9	0.3
15	0.6	0.3	0.2	1.3	0.2	0.6	1.4	0.6	0.4	0.3	0.5	0.1
16	0.4	0.5	1.1	1.0	0.3	0.5	1.5	0.1	1.3	0.3	0.2	0.4
17	0.6	0.4	0.8	1.0	0.7	0.9	1.1	0.7	1.1	0.5	1.7	0.3
18	0.6	0.1	0.4	0.8	0.4	1.0	0.7	0.8	0.6	1.0	1.0	0.6
19	0.1	0.3	0.6	0.5	0.4	1.0	0.1	1.6	0.6	0.2	0.5	0.6
20	0.0	0.1	1.1	0.0	0.4	1.0	0.2	0.4	0.2	0.1	0.3	0.1
21	0.7	0.1	0.9	0.4	0.7	0.7	0.3	1.6	0.1	0.2	0.3	0.1
22	0.3	1.3	0.5	1.1	0.5	0.3	0.2	1.0	0.4	0.1	0.1	0.4
23	0.2	1.2	0.4	1.1	1.1	0.2	0.2	0.3	0.5	0.1	0.1	0.6
24	0.6	1.1	0.2	1.0	1.2	1.0	0.9	0.4	0.8	0.2	0.5	0.2
25	0.9	0.4	0.5	0.9	1.4	0.8	1.2	0.8	0.7	0.2	0.3	0.8
26	0.5	0.5	1.8	1.0	1.6	1.0	0.6	0.6	0.3	0.5	0.4	1.1
27	1.0	0.9	1.9	1.0	1.2	0.9	0.3	0.2	0.5	0.5	0.4	0.4
28	0.9	0.6	1.7	0.8	1.1	0.5	0.3	0.2	1.4	0.0	1.0	0.4
29	1.2	1.1	1.2	0.7	1.0	0.6	0.2	0.9	2.0	0.2	0.7	0.3
30	0.6		1.1	0.3	1.0	0.7	0.3	0.6	1.9	0.4	0.2	0.3
31	0.6		1.0		0.8		0.1	0.7		1.4		0.4

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1909							
1	1.6	0.9	0.4	0.5	0.8	0.8	0.6	0.4	0.6	0.6	0.2	1.3
2	1.3	1.4	0.6	0.3	0.4	0.7	0.4	1.0	0.6	1.2	0.1	1.1
3	2.0	1.0	0.9	0.2	0.3	0.3	0.7	1.0	1.2	0.9	0.1	0.4
4	1.4	0.7	0.9	0.2	0.3	0.2	0.4	0.4	1.0	0.8	0.1	0.6
5	0.7	0.4	1.2	0.2	0.3	0.4	0.1	0.4	0.9	0.2	0.0	0.2
6	0.1	1.3	1.1	0.1	0.2	0.2	0.1	0.1	0.9	0.3	0.6	0.7
7	0.0	0.7	0.6	0.0	0.1	0.4	0.2	1.0	0.9	0.7	0.2	0.1
8	0.2	0.7	0.8	0.1	0.1	0.3	0.7	0.7	1.0	1.1	0.7	0.0
9	0.2	0.6	0.2	0.3	0.2	0.1	0.6	1.1	0.9	0.9	0.2	0.1
10	0.2	0.7	0.3	1.0	0.4	0.3	0.1	1.0	0.4	0.4	0.2	0.2
11	0.2	0.1	0.2	1.0	0.7	0.7	0.3	0.9	0.1	0.6	0.6	0.1
12	0.1	0.1	0.4	1.0	0.4	0.2	1.0	0.5	0.0	0.7	0.1	0.3
13	1.1	0.3	0.6	0.6	0.2	0.3	1.0	0.6	0.1	0.1	0.3	1.1
14	0.9	0.3	0.6	0.2	2.0	0.8	0.8	0.2	0.3	0.2	0.7	1.3
15	0.6	0.2	0.2	0.1	1.8	0.9	0.9	0.0	0.6	0.5	0.9	0.8
16	0.2	0.3	0.2	1.0	0.8	0.7	0.5	0.0	0.2	0.2	1.0	1.0
17	0.3	0.4	0.5	0.9	0.4	0.6	0.2	0.2	0.2	0.4	0.4	0.9
18	0.7	0.2	1.3	0.9	1.8	0.4	0.0	0.4	0.0	1.6	0.4	0.9
19	0.5	0.2	1.8	0.6	1.4	0.3	0.1	0.9	0.0	1.8	0.3	0.6
20	0.2	0.4	0.7	0.3	0.5	0.1	0.2	0.6	0.4	0.8	1.2	0.6
21	0.3	1.1	1.2	0.0	0.3	1.1	0.8	0.1	1.5	0.7	0.8	1.1
22	0.1	1.2	1.1	0.0	0.7	1.1	0.6	0.5	0.9	0.5	0.9	0.9
23	0.3	1.3	0.8	0.3	0.4	1.0	1.0	0.3	0.3	1.7	0.3	0.6
24	0.7	1.1	0.2	0.7	0.0	0.7	1.1	0.5	0.5	1.6	0.3	0.1
25	1.2	0.2	1.1	1.0	0.1	0.2	0.3	0.6	2.0	0.9	0.2	0.3
26	0.9	0.9	1.1	1.1	0.9	0.3	0.3	0.9	1.2	0.4	0.4	0.4
27	1.2	0.7	1.3	1.1	0.8	0.1	0.7	0.8	0.8	0.2	1.1	0.4
28	1.1	0.3	1.5	0.2	0.7	0.9	0.9	1.0	0.9	0.2	0.3	0.3
29	1.6		1.5	0.3	0.3	1.1	0.9	1.4	0.8	0.5	0.6	0.4
30	1.7		0.5	0.4	0.1	0.9	0.5	1.4	1.8	0.5	1.6	0.3
31	1.9		0.4		0.7		0.3	1.0		0.3		0.9

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1910							
1	0.6	0.3	0.8	1.3	0.6	0.4	0.0	1.1	0.9	0.9	0.3	0.9
2	0.2	1.0	0.8	1.2	0.8	0.2	0.1	1.0	0.7	1.2	1.0	1.2
3	0.2	1.0	0.7	0.7	0.8	0.1	0.7	0.9	0.3	1.2	0.3	1.0
4	0.6	0.9	1.1	1.1	0.7	0.2	0.9	1.0	0.2	1.6	0.7	0.8
5	0.7	0.4	1.0	0.5	0.4	0.1	1.3	0.9	0.4	0.9	0.6	0.9
6	0.5	0.1	1.1	0.5	0.4	0.4	1.1	0.1	1.1	1.5	0.3	1.0
7	0.2	0.1	1.0	0.1	0.7	0.2	1.0	0.0	0.9	0.8	0.9	1.0
8	0.1	0.1	0.3	0.1	0.1	1.1	0.7	0.1	0.5	0.8	1.1	0.7
9	0.8	0.6	0.7	0.3	0.6	1.0	0.8	0.4	0.3	0.4	1.0	0.2
10	0.3	0.4	0.7	0.0	0.5	0.8	0.9	1.5	0.9	0.7	1.0	0.1
11	0.1	0.4	0.4	0.1	0.5	0.8	0.4	0.9	0.9	0.9	0.5	0.1
12	0.9	0.2	0.1	1.0	0.3	0.5	0.0	0.3	0.2	1.4	0.2	0.1
13	0.8	0.3	1.0	0.5	1.1	0.7	0.0	0.6	0.9	1.5	0.1	1.0
14	0.6	1.1	1.1	0.2	0.9	0.1	0.0	1.1	1.0	0.9	0.4	0.9
15	0.1	0.9	0.9	0.1	0.9	0.0	0.5	0.7	0.5	0.4	0.4	1.3
16	0.0	0.6	1.1	0.4	0.7	0.0	0.3	0.2	1.0	0.1	1.0	0.7
17	1.3	1.3	1.1	0.9	0.9	0.2	0.4	0.4	0.4	0.0	1.2	0.1
18	0.4	1.0	0.7	1.3	1.1	0.0	0.5	1.1	0.2	0.0	1.6	0.7
19	0.7	0.3	0.4	0.9	1.1	0.5	0.7	1.2	0.1	1.6	1.4	0.8
20	0.2	1.4	1.1	0.2	0.7	1.7	0.5	1.0	1.0	1.3	0.9	0.8
21	0.7	1.2	1.0	0.1	0.3	1.2	0.2	1.2	1.0	1.3	0.8	0.7
22	1.0	0.9	0.8	0.7	0.4	1.0	0.7	1.8	1.1	0.9	0.9	1.1
23	0.9	0.7	0.3	1.1	0.6	0.9	0.9	1.0	0.9	1.0	0.5	0.7
24	1.4	1.0	0.1	0.9	1.1	0.7	0.9	1.1	1.0	1.0	0.3	0.7
25	1.4	1.2	0.0	0.6	1.5	0.8	0.7	0.5	1.5	1.3	0.9	1.0
26	1.3	0.9	0.1	0.7	1.0	0.9	0.4	0.2	1.0	1.2	0.7	0.2
27	0.8	0.8	1.4	1.6	0.7	0.4	0.1	0.4	1.1	1.6	0.9	0.4
28	0.5	0.8	1.9	1.3	0.9	0.3	0.3	1.3	1.0	1.2	1.1	1.5
29	0.3		1.3	1.1	0.7	0.9	1.0	1.4	1.8	0.9	1.2	1.4
30	0.1		1.2	1.1	0.6	0.1	0.7	1.1	1.1	0.9	1.1	0.9
31	0.1		1.5		0.9		0.4	0.9		0.4		0.7

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1911							
1	0.6	1.0	1.0	0.6	0.1	0.9	1.3	0.2	0.2	0.1	0.0	0.7
2	1.0	1.2	0.4	0.5	0.4	0.1	0.9	0.1	0.1	0.8	0.1	0.1
3	1.0	0.5	0.8	0.8	0.3	0.1	0.8	0.8	0.0	0.5	1.0	0.2
4	0.8	0.5	0.9	0.8	0.0	1.2	0.7	0.9	0.1	0.3	0.7	0.1
5	1.0	0.9	1.2	0.1	0.6	1.0	0.4	0.8	0.5	0.0	0.7	0.1
6	0.8	0.9	0.8	0.2	0.8	0.7	0.6	0.6	0.2	0.2	0.3	1.5
7	0.2	0.9	0.6	0.5	1.4	0.3	1.0	0.1	0.3	0.5	0.1	0.5
8	1.1	0.9	0.8	1.5	0.8	0.1	1.0	0.1	0.1	0.8	0.8	0.2
9	1.0	0.5	0.2	1.7	0.5	1.1	0.2	0.2	0.1	0.9	1.1	0.1
10	0.9	0.8	0.1	1.2	0.6	1.2	0.6	0.1	0.6	1.6	0.7	0.6
11	0.8	0.4	0.1	0.6	1.0	1.1	0.7	0.1	0.9	1.5	0.3	1.9
12	0.1	0.3	0.1	0.7	0.3	0.8	0.4	0.1	0.8	0.5	0.8	0.5
13	0.9	1.2	0.5	0.2	0.1	0.9	0.2	0.8	0.5	0.6	1.7	0.1
14	0.4	1.1	0.9	0.0	1.2	0.9	0.1	0.1	0.1	0.6	1.4	0.6
15	0.6	0.3	0.8	0.2	1.6	0.6	0.1	0.2	0.8	0.1	0.9	0.1
16	0.9	0.9	0.6	1.7	1.1	0.4	0.1	0.5	1.1	0.7	0.5	0.1
17	0.1	0.9	0.1	1.3	0.9	0.1	1.1	0.5	0.7	1.1	0.7	1.0
18	0.9	0.8	0.0	1.1	0.7	0.0	1.0	0.2	0.3	1.4	0.1	0.6
19	0.4	0.5	0.2	0.9	0.9	0.0	1.2	1.1	1.0	0.9	0.6	0.1
20	0.3	0.3	1.9	1.0	0.8	0.6	0.5	0.8	1.7	0.7	0.5	0.0
21	0.2	1.8	1.7	1.2	1.0	1.0	0.3	0.3	1.6	0.7	0.2	0.1
22	0.4	1.8	1.2	1.1	0.3	0.8	0.3	0.1	1.1	0.6	0.0	0.0
23	0.7	1.3	1.4	0.8	0.6	0.9	0.1	1.8	0.9	0.1	0.0	0.1
24	1.7	1.1	1.1	0.7	0.3	0.2	0.8	1.4	0.2	0.7	0.1	0.1
25	1.4	1.0	1.2	0.3	1.0	0.0	0.1	1.1	0.0	0.7	0.5	0.8
26	1.1	0.9	1.2	0.2	0.8	0.0	0.1	1.1	0.1	0.3	0.3	1.2
27	0.8	1.1	1.2	0.3	0.5	0.1	0.4	0.9	0.5	0.4	0.1	0.8
28	1.1	1.2	1.1	0.8	0.6	0.7	1.6	0.8	0.2	0.0	0.1	0.5
29	0.8		1.0	0.5	0.4	0.2	1.1	0.1	0.1	0.6	0.2	0.1
30	0.8		0.5	1.2	1.0	0.3	1.0	0.2	0.1	0.1	0.2	0.3
31	1.2		0.7		1.1		0.4	0.9		0.1		0.9

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1912							
1	0.7	0.1	0.4	0.1	0.1	1.0	0.3	0.9	0.3	1.0	0.4	0.3
2	0.0	0.7	0.1	0.3	0.5	0.8	0.2	0.3	0.1	0.0	0.5	1.0
3	0.1	0.6	0.6	0.4	0.6	0.8	0.9	0.2	0.6	0.6	0.0	0.7
4	0.3	0.3	0.0	0.3	0.5	0.2	1.3	0.0	0.7	0.3	0.1	0.0
5	0.7	0.1	0.8	1.3	1.3	0.0	1.2	0.9	0.5	0.0	0.7	0.0
6	0.3	0.1	0.9	1.0	0.9	0.1	0.7	1.7	0.4	0.1	0.6	1.0
7	0.3	0.2	0.9	0.8	0.8	0.6	0.6	0.5	0.1	0.4	0.1	1.4
8	0.3	0.4	1.5	0.1	0.7	1.2	0.5	0.0	0.6	0.3	0.4	0.6
9	0.4	0.2	1.0	0.1	0.1	0.9	0.1	0.0	0.7	0.2	0.8	0.5
10	0.5	0.9	0.9	1.0	0.2	0.9	0.1	0.3	0.2	0.4	1.2	0.2
11	0.8	0.7	0.2	0.1	0.6	0.6	0.0	0.2	0.4	1.2	1.0	0.4
12	1.1	1.0	0.4	0.2	1.3	0.3	0.0	0.0	0.6	0.8	0.0	0.1
13	1.2	1.1	0.1	0.2	1.4	0.1	0.1	0.0	0.3	0.9	0.2	0.8
14	0.6	0.3	0.6	0.8	1.0	0.2	0.6	0.5	0.3	1.6	1.4	0.4
15	0.0	0.2	0.7	1.3	0.3	0.1	0.0	0.4	0.0	1.3	0.8	0.1
16	0.0	0.9	0.2	1.0	0.1	0.1	0.5	0.4	0.0	0.9	0.9	0.0
17	0.8	1.0	0.0	1.0	0.2	0.3	0.5	0.9	1.8	0.7	0.6	0.0
18	0.7	0.6	0.1	0.6	0.2	0.2	0.2	1.0	1.1	0.0	0.4	0.3
19	0.4	0.3	0.0	0.6	0.4	0.1	0.1	0.9	0.4	0.0	0.2	0.1
20	0.5	0.1	0.1	0.5	0.3	0.1	0.7	0.2	0.5	0.7	0.3	0.0
21	0.2	0.1	0.9	0.0	0.2	0.2	0.4	0.6	0.1	0.3	0.0	0.0
22	1.0	0.3	0.8	0.1	0.1	0.6	0.1	1.1	0.7	0.4	0.8	1.2
23	0.3	0.8	0.1	0.3	0.1	0.9	0.1	0.9	0.9	0.3	0.6	1.3
24	0.5	0.9	0.0	0.2	0.3	0.6	0.0	0.4	1.6	0.2	0.0	0.9
25	0.1	0.7	0.1	0.3	0.1	0.2	0.3	0.3	0.3	0.3	0.1	0.5
26	0.0	1.1	0.6	0.1	0.1	0.2	0.7	0.1	0.6	0.0	0.8	0.2
27	0.1	0.1	0.0	0.2	0.2	0.8	0.8	0.8	0.0	0.3	0.3	0.0
28	0.5	0.3	0.7	0.1	0.0	0.9	0.1	0.7	0.0	0.7	0.0	0.0
29	0.1	0.2	1.1	0.1	0.8	0.8	0.0	0.4	0.2	0.1	0.0	0.2
30	0.3		0.1	0.3	0.6	0.3	0.3	0.3	0.3	0.2	0.0	0.5
31	0.1		0.1		0.8		1.1	0.3		0.1		0.1

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1913							
1	0.0	0.3	0.0	0.9	0.6	1.4	0.6	0.1	0.5	0.1	0.7	0.4
2	1.0	0.1	0.0	0.2	0.4	1.0	0.3	0.2	0.4	0.0	1.4	0.5
3	1.4	0.0	0.4	0.4	0.6	0.8	0.4	0.3	0.5	0.0	1.1	0.2
4	0.8	0.0	0.3	0.6	1.4	0.8	0.1	0.5	0.2	0.7	0.1	1.2
5	0.4	0.0	0.1	0.2	1.4	0.2	0.2	0.2	0.4	1.2	0.1	0.8
6	0.1	0.2	0.1	0.1	1.3	0.0	0.3	0.5	1.0	1.4	0.7	0.2
7	0.0	0.6	0.6	0.2	1.1	0.0	0.4	0.6	1.0	1.4	1.0	0.8
8	0.3	0.6	0.8	0.9	0.7	0.0	0.2	0.3	1.5	1.3	0.9	0.2
9	0.7	0.7	0.3	1.9	0.5	0.1	0.0	0.9	1.4	1.1	0.3	0.6
10	1.0	0.2	0.0	1.1	0.4	0.2	0.5	1.0	1.1	1.1	0.1	0.0
11	0.1	0.1	0.9	0.8	0.1	0.1	0.2	1.0	0.8	0.6	0.4	0.1
12	0.1	1.0	0.3	1.3	0.1	0.0	1.3	0.9	0.9	0.7	0.3	0.2
13	0.3	1.0	0.3	0.7	0.3	0.4	0.9	0.8	0.6	0.7	0.5	0.0
14	0.6	1.6	1.6	0.6	0.0	0.5	0.9	0.2	0.1	0.4	0.0	0.3
15	0.6	1.2	1.2	0.9	0.5	0.7	0.9	0.7	0.2	0.5	0.0	0.1
16	0.1	0.9	1.3	1.0	0.1	0.4	0.2	0.9	0.4	0.3	0.0	0.2
17	0.5	0.9	1.2	0.9	0.2	0.2	0.1	0.2	0.5	0.1	0.3	0.0
18	1.3	0.5	0.4	0.1	0.7	0.1	0.1	0.5	0.5	1.2	0.3	0.3
19	1.0	0.8	0.3	0.2	0.5	0.9	0.1	0.2	0.6	0.9	0.4	0.7
20	0.8	0.4	0.1	0.0	0.1	0.2	1.1	0.1	0.1	0.8	0.1	0.2
21	0.3	0.6	0.9	0.0	0.0	0.5	0.8	0.2	0.2	0.2	0.2	0.1
22	0.4	0.4	0.5	0.1	0.0	0.2	0.3	0.2	1.3	0.3	0.2	0.2
23	0.2	0.1	1.0	0.5	0.0	0.6	0.2	1.0	1.0	0.0	0.1	0.0
24	0.1	0.0	0.4	0.3	0.3	0.7	0.5	0.4	0.3	0.0	0.1	0.2
25	0.8	1.1	0.2	0.1	0.5	0.1	1.1	0.4	0.5	0.4	0.1	1.0
26	0.2	1.1	0.1	0.1	0.2	0.7	0.5	0.5	0.5	0.0	0.5	1.1
27	0.3	0.4	0.2	0.9	0.7	0.1	0.2	0.4	0.1	0.4	0.8	0.8
28	0.6	0.0	0.3	0.7	0.5	0.9	0.1	0.6	0.1	0.1	1.1	0.1
29	0.3		0.8	0.1	0.5	1.0	0.2	0.0	0.0	0.1	0.5	0.2
30	1.3		0.9	0.0	0.2	0.5	0.2	0.1	0.7	0.5	0.1	0.1
31	0.7		0.9		0.2		0.1	0.1		0.9		0.1

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1914							
1	0.2	0.1	0.9	1.0	0.1	1.5	0.0	0.9	0.1	1.1	1.2	0.1
2	0.6	0.5	1.1	0.7	0.1	0.8	0.0	1.0	0.0	0.9	0.5	0.0
3	0.4	1.0	0.8	0.5	0.0	0.8	0.0	1.3	0.5	0.9	1.2	0.5
4	0.7	0.9	0.9	0.2	0.0	0.3	0.1	0.9	0.8	0.5	1.3	0.4
5	1.2	0.8	0.4	0.2	0.5	0.3	1.7	0.5	0.8	0.5	0.9	0.6
6	0.6	1.0	1.3	1.9	0.9	0.4	0.8	1.0	0.8	0.8	0.2	0.1
7	0.9	0.6	1.0	1.4	0.5	0.7	0.5	0.5	0.0	0.9	0.7	0.9
8	0.8	0.2	0.3	1.2	0.3	0.9	0.1	0.4	0.2	0.6	0.1	0.8
9	0.1	0.2	0.3	0.6	0.0	0.1	0.5	0.1	0.8	0.9	0.0	1.0
10	0.0	0.1	0.6	0.7	0.1	0.2	0.8	0.1	0.7	0.7	0.5	0.6
11	0.4	0.1	0.9	0.4	0.9	0.3	0.1	0.8	0.5	0.4	1.4	0.1
12	0.8	0.2	0.9	0.1	0.2	0.0	0.1	0.3	0.5	0.2	0.9	0.3
13	0.9	0.6	0.2	0.2	0.1	0.1	0.1	0.4	0.1	0.3	0.3	0.0
14	0.6	0.5	0.5	0.1	0.0	0.1	0.2	0.1	0.2	0.1	1.0	0.1
15	0.8	0.9	1.2	0.1	0.9	0.6	0.4	0.2	0.2	0.4	0.8	0.0
16	0.9	0.4	0.7	1.0	0.8	0.1	0.4	0.1	0.8	0.6	0.8	1.0
17	0.6	0.8	1.0	0.4	1.2	0.0	0.3	0.4	0.3	1.0	0.8	0.8
18	0.2	0.9	0.8	0.3	0.3	0.2	0.6	0.6	0.8	0.6	0.5	0.1
19	0.1	0.2	0.5	0.8	0.0	1.0	0.1	0.9	0.2	0.6	0.5	0.7
20	0.1	0.2	0.6	0.1	0.0	0.8	0.4	0.9	0.2	0.3	0.0	0.1
21	0.6	0.1	0.2	0.1	0.1	0.3	0.6	0.3	0.0	0.9	0.0	0.0
22	1.3	1.1	0.1	0.1	0.1	0.1	0.8	0.1	0.2	0.7	0.1	0.8
23	0.4	0.7	0.4	0.6	0.0	0.0	0.8	1.2	1.2	0.2	0.0	0.1
24	0.0	0.5	0.8	0.7	0.2	0.1	0.9	0.5	0.9	0.1	0.1	0.9
25	0.0	0.1	0.9	0.1	0.8	1.1	1.3	0.8	0.4	0.0	0.1	0.2
26	0.0	0.1	0.6	0.0	1.1	1.1	0.9	0.6	0.2	0.0	1.1	0.0
27	0.1	0.1	0.7	0.9	0.4	1.2	0.7	0.3	1.8	1.0	1.1	0.9
28	0.7	1.0	0.1	0.4	0.5	1.1	0.9	1.0	1.0	1.8	0.5	1.5
29	0.0		0.1	0.0	0.0	0.8	1.8	1.4	0.9	1.8	0.7	0.3
30	0.1		0.2	0.0	0.1	0.7	1.4	1.1	0.9	0.9	0.4	0.8
31	0.2		0.3		1.2		1.3	0.6		0.2		0.6

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1915											
1	1.3	0.6	0.1	0.5	1.2	0.1	0.3	0.8	0.0	0.7	1.6	0.0
2	0.0	0.7	0.1	1.1	1.3	0.1	1.2	1.2	0.1	0.1	0.8	0.1
3	0.1	0.1	0.1	0.9	0.9	0.0	0.7	1.0	0.1	0.3	0.3	0.3
4	0.6	0.4	0.2	0.3	0.8	0.0	0.0	0.7	0.0	0.2	0.2	0.1
5	1.5	0.9	0.4	0.2	0.5	0.0	0.2	0.0	0.5	0.0	1.6	0.1
6	0.8	0.5	0.7	0.4	0.1	0.1	1.1	0.8	0.1	0.1	2.0	1.9
7	0.8	0.1	1.2	1.1	0.0	0.6	0.0	1.2	0.1	0.4	0.9	1.1
8	0.7	1.3	1.4	1.5	0.0	0.9	0.7	0.8	0.0	0.1	0.9	0.5
9	0.3	1.1	1.1	0.4	0.3	0.5	1.1	0.1	0.1	0.0	0.5	0.6
10	0.1	0.4	0.7	0.1	0.1	0.1	0.9	0.8	0.6	1.1	0.9	0.5
11	0.1	0.1	0.6	0.2	0.1	0.5	1.1	0.2	0.2	0.7	0.8	0.8
12	0.8	0.6	0.5	0.1	0.7	1.4	1.0	0.1	0.3	0.1	0.9	0.7
13	0.8	0.3	0.3	0.0	0.6	1.4	0.2	0.0	0.7	0.1	0.3	0.0
14	0.8	0.0	0.1	0.3	0.7	0.9	0.1	0.0	0.1	1.5	0.0	0.9
15	0.3	0.4	0.1	1.1	0.7	0.2	0.0	0.0	0.2	1.9	1.2	1.4
16	0.1	0.0	0.7	1.0	1.1	0.9	0.0	0.2	0.9	1.4	1.7	0.9
17	0.3	0.2	0.9	0.5	1.3	2.0	0.0	0.9	1.1	0.9	1.5	0.4
18	0.0	0.1	0.9	1.0	0.2	1.7	0.1	0.6	0.1	0.2	1.5	0.1
19	0.0	1.5	0.9	1.0	0.8	0.1	0.0	0.9	0.1	1.6	1.1	0.3
20	0.6	1.3	1.5	0.9	0.9	0.2	0.1	0.5	0.0	1.4	1.1	0.3
21	0.3	1.1	1.6	0.8	0.9	1.0	0.1	0.7	0.4	1.2	1.0	0.0
22	0.4	1.1	1.5	1.3	0.7	1.2	0.8	0.4	1.6	1.2	1.0	0.1
23	0.1	1.3	1.0	1.0	0.3	0.7	0.3	0.3	1.8	1.9	0.3	0.9
24	0.5	1.2	0.7	0.1	0.6	0.4	0.1	0.1	1.3	1.5	0.1	0.6
25	1.4	1.0	1.1	0.2	0.6	0.9	0.6	0.8	1.1	1.6	0.3	0.9
26	1.1	1.0	0.8	1.3	0.3	0.7	0.8	1.6	1.2	1.1	0.6	1.1
27	0.9	0.4	0.3	0.3	1.3	0.6	1.2	1.0	1.1	0.5	0.9	0.9
28	0.7	0.3	0.2	0.1	0.0	0.4	0.2	0.9	1.3	0.3	0.9	0.2
29	0.4		0.4	0.1	0.0	0.7	0.9	1.2	1.3	0.3	0.0	0.3
30	0.6		0.8	0.5	0.5	0.1	0.7	0.8	1.2	0.7	0.1	0.3
31	0.1		0.2		0.6		0.1	0.3		0.8		0.3

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1916											
1	0.1	0.1	0.1	0.9	0.9	0.8	1.6	0.1	0.1	1.4	0.4	1.4
2	0.0	0.1	0.5	0.3	1.0	0.0	0.9	1.2	0.8	1.2	0.8	1.4
3	0.4	0.1	1.2	0.1	0.8	0.1	0.7	0.6	1.3	0.6	1.2	1.2
4	0.8	0.5	0.7	0.0	0.5	0.1	1.0	0.3	1.4	0.2	1.4	0.9
5	0.6	1.0	0.6	0.1	0.9	0.2	1.0	1.1	1.2	0.8	1.4	0.3
6	0.5	0.1	1.0	0.6	1.1	0.8	0.8	1.5	0.6	2.0	1.3	0.3
7	0.1	0.1	1.0	0.7	0.7	0.9	0.3	1.1	0.8	1.7	0.9	0.3
8	0.1	1.2	1.9	1.1	0.7	1.1	1.5	1.0	0.6	1.4	0.7	0.3
9	0.7	0.7	1.9	0.5	0.7	0.5	1.3	0.7	0.2	1.1	0.7	0.5
10	1.3	0.4	1.7	0.0	0.6	0.1	1.0	0.5	1.0	0.8	0.5	0.3
11	1.9	0.2	0.9	0.3	1.0	0.4	0.9	0.6	1.2	1.2	0.6	0.2
12	1.6	1.0	0.8	0.2	0.9	0.9	0.7	0.4	1.4	1.0	1.8	1.0
13	1.1	0.8	0.0	0.1	0.3	0.9	0.7	0.5	0.9	1.5	0.9	0.8
14	0.2	0.7	0.2	0.7	0.2	0.4	0.4	0.7	0.3	1.0	0.4	0.7
15	0.1	0.5	0.1	1.1	0.1	0.3	0.0	0.0	0.8	0.2	0.7	1.3
16	0.4	0.1	0.3	1.0	0.8	0.0	0.3	0.0	1.1	0.0	0.5	0.9
17	0.0	1.0	1.4	0.5	0.7	0.7	1.1	0.0	1.1	0.1	0.5	0.9
18	0.3	1.1	1.0	0.9	0.2	1.0	0.9	0.1	0.8	0.1	0.9	0.5
19	0.1	0.9	0.9	0.3	0.5	1.1	0.6	1.0	0.0	0.3	0.7	0.2
20	1.2	0.8	1.1	0.8	0.3	1.0	0.4	1.0	0.0	0.8	0.4	0.2
21	0.6	0.1	0.9	0.3	1.4	0.9	0.2	0.8	0.1	1.0	0.3	0.1
22	1.1	0.9	0.3	0.7	1.7	1.3	0.3	1.5	0.5	1.0	0.6	0.0
23	1.2	0.7	0.1	0.3	1.3	1.1	1.1	1.5	0.7	0.9	0.6	0.0
24	0.7	0.6	1.3	0.1	1.1	0.3	0.8	0.9	0.8	0.8	0.1	0.3
25	1.1	0.1	1.2	1.9	0.8	0.9	0.2	0.0	0.6	0.7	1.1	0.7
26	0.7	0.8	0.8	1.4	0.3	0.8	0.2	1.4	0.9	0.2	1.1	0.4
27	0.2	1.2	0.0	1.4	0.2	0.7	0.0	1.9	1.3	0.1	1.2	1.2
28	0.4	0.3	0.2	1.5	0.3	0.8	0.1	0.7	0.3	0.1	1.0	1.1
29	0.8	0.1	1.7	1.8	0.7	0.9	0.0	1.0	0.1	0.9	1.0	0.8
30	0.1		1.5	0.9	1.4	1.0	0.3	0.7	1.5	0.3	1.1	1.1
31	0.3		1.2		1.2		0.1	0.4		0.2		1.0

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1917							
1	0.8	0.1	0.7	0.6	1.2	0.0	0.2	1.1	0.1	1.0	0.7	0.4
2	0.5	0.4	0.1	0.9	1.5	0.0	1.3	0.3	1.1	1.2	0.2	0.9
3	0.1	0.2	0.3	1.0	1.4	0.7	1.1	0.3	1.1	1.3	0.2	1.1
4	2.0	0.5	1.1	0.6	0.9	1.0	0.5	0.1	0.9	1.1	0.0	1.1
5	1.6	0.7	1.5	1.0	0.9	0.0	0.1	0.1	1.7	0.9	0.1	0.9
6	1.2	0.7	1.0	1.2	0.1	0.5	0.1	0.0	0.7	0.9	0.4	0.5
7	1.0	0.9	0.8	0.6	0.4	1.5	0.8	0.8	0.3	0.3	0.3	0.7
8	1.0	0.8	1.3	0.8	0.0	1.0	0.2	0.7	0.5	1.0	0.3	1.2
9	0.8	0.1	0.7	1.4	0.6	0.6	0.1	2.0	1.1	0.7	0.1	0.8
10	0.9	0.4	0.5	0.1	0.3	0.5	0.5	1.7	0.3	0.4	0.1	0.1
11	0.8	0.5	0.3	0.0	0.3	0.3	1.0	0.6	0.1	1.0	0.4	0.6
12	1.3	0.0	0.4	0.3	0.3	0.2	0.8	0.4	0.3	0.2	1.6	0.5
13	1.1	0.2	1.0	0.3	0.2	1.2	1.5	1.9	0.4	1.4	1.0	0.1
14	0.5	0.6	0.2	0.0	0.9	0.9	0.6	1.9	0.2	1.6	1.3	0.9
15	0.1	1.9	0.8	0.8	0.3	0.4	0.3	1.6	0.3	0.4	0.1	0.4
16	0.5	1.5	0.8	1.2	1.2	0.5	0.0	0.9	0.3	0.1	0.1	2.0
17	0.5	0.7	0.1	0.9	0.8	0.4	0.0	0.6	0.5	0.3	0.3	1.6
18	0.3	1.1	0.2	0.9	0.5	0.1	0.0	0.4	0.8	0.1	0.4	1.6
19	0.7	1.1	0.2	0.1	0.1	0.0	0.2	0.1	1.1	0.1	1.0	1.1
20	1.0	1.5	1.0	0.1	0.2	0.0	0.0	1.2	1.0	0.1	0.8	1.0
21	1.1	0.8	1.0	0.2	0.7	0.0	1.1	1.9	0.8	0.0	0.1	0.4
22	1.3	0.9	0.7	0.7	0.8	0.8	1.2	1.4	0.7	0.1	0.3	0.0
23	1.1	0.8	0.6	0.5	0.6	1.3	0.2	1.4	0.0	0.7	0.0	0.3
24	0.7	0.7	0.4	0.7	0.4	1.7	0.3	0.5	0.5	0.8	0.4	0.3
25	1.1	0.6	1.1	0.9	0.7	1.2	0.3	1.0	0.2	1.3	1.2	0.7
26	0.9	0.7	0.4	1.4	0.7	0.5	0.2	1.7	0.1	0.1	1.4	1.2
27	0.7	0.4	0.8	0.1	1.0	0.1	1.0	0.5	0.3	0.4	1.4	0.5
28	0.1	0.7	0.0	0.1	1.3	0.4	1.1	0.1	0.8	1.6	0.9	0.2
29	0.3		0.1	0.5	1.1	0.4	1.5	0.1	0.8	1.6	0.5	0.5
30	0.5		0.0	1.0	0.8	0.1	0.9	0.7	1.1	1.2	0.2	0.5
31	0.8		0.4		0.3		1.8	0.2		1.0		0.1

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1918							
1	0.1	1.2	0.6	0.4	1.1	0.1	0.9	0.4	1.5	1.2	0.7	1.7
2	0.2	1.0	0.7	0.6	0.5	0.0	0.8	0.9	0.8	1.2	0.6	0.7
3	1.0	0.2	1.1	0.5	0.4	0.0	0.8	0.9	1.0	1.2	0.1	1.3
4	0.9	0.2	0.6	0.9	0.7	0.0	0.5	0.6	1.2	1.2	0.2	0.7
5	1.0	1.3	0.1	1.5	1.0	0.4	0.4	0.8	1.2	1.2	0.1	0.1
6	1.0	1.3	0.1	1.7	0.4	0.6	0.2	0.9	0.9	0.9	0.0	0.0
7	0.4	0.8	1.1	1.1	0.1	0.6	0.3	1.0	0.8	0.7	0.1	1.2
8	0.1	0.1	2.0	0.8	0.1	0.5	1.1	1.1	1.1	1.6	0.2	2.0
9	0.2	0.8	0.9	0.7	0.2	1.3	1.0	1.0	0.6	1.1	0.3	1.5
10	0.7	1.1	1.1	0.8	0.4	1.9	0.8	0.6	0.6	0.3	0.9	1.4
11	0.2	1.2	1.1	1.8	0.9	1.2	1.1	0.9	0.1	0.1	1.6	1.1
12	1.3	1.9	1.1	1.1	0.7	1.2	0.7	0.3	0.1	0.1	1.7	0.9
13	1.0	1.4	0.2	0.0	0.6	0.9	0.8	0.5	0.5	0.0	1.4	1.0
14	0.9	1.1	0.4	0.1	0.9	1.1	1.0	0.7	0.5	0.1	1.2	0.7
15	0.9	1.3	1.5	0.3	1.1	1.2	0.9	2.0	0.2	1.1	1.5	0.4
16	0.4	1.1	1.3	0.3	1.7	1.1	0.5	1.7	1.1	2.0	1.2	0.3
17	0.1	0.5	0.4	0.4	1.9	0.9	0.2	0.3	1.1	1.5	1.0	0.8
18	0.1	0.1	0.4	1.3	1.3	0.4	0.5	0.1	1.2	1.1	0.6	0.6
19	0.0	0.1	0.0	1.4	1.1	0.1	0.0	0.0	1.4	1.2	0.8	1.4
20	0.3	0.5	0.8	0.1	1.0	0.3	0.0	0.5	1.2	1.1	0.6	1.1
21	0.9	0.7	1.0	0.6	0.9	0.9	0.1	0.1	2.0	0.7	0.5	1.0
22	0.4	0.0	1.0	0.7	0.5	0.5	0.1	0.5	1.2	0.8	0.6	0.8
23	0.1	1.1	1.1	1.0	0.4	0.0	0.3	0.3	0.7	0.6	1.6	1.0
24	0.7	0.8	0.3	0.2	0.4	0.2	0.3	1.1	0.9	0.7	1.3	0.8
25	0.5	0.0	0.0	1.2	0.2	0.1	1.4	1.5	0.4	0.9	0.5	2.0
26	0.4	0.1	0.5	1.4	0.1	0.9	0.9	1.3	0.2	0.2	0.1	1.5
27	0.7	0.6	0.9	0.4	0.1	0.3	0.9	1.2	0.6	0.1	0.2	0.3
28	0.4	1.1	0.4	0.6	0.1	0.1	1.5	0.7	1.1	1.1	0.6	0.1
29	1.4		0.7	0.4	1.0	0.0	1.3	0.3	1.0	0.6	1.8	0.1
30	1.8		0.5	1.3	0.9	0.0	1.2	0.1	1.2	0.6	1.2	0.1
31	1.6		0.6		0.2		1.0	1.2		1.4		0.7

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich	Month											
mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1919							
1	0.2	1.4	1.4	0.6	0.4	0.5	0.9	0.8	0.0	1.8	0.1	0.2
2	0.1	1.2	1.5	0.1	1.9	0.5	0.5	0.8	1.5	1.4	0.3	0.2
3	1.4	1.1	1.1	0.1	1.8	0.4	0.8	0.6	1.1	1.7	0.2	1.0
4	1.9	0.9	1.0	0.9	0.8	0.4	0.3	0.6	1.0	1.5	1.5	0.9
5	1.6	1.0	0.8	0.0	1.0	0.5	0.1	0.8	0.2	2.0	0.5	0.9
6	1.2	0.7	1.0	1.1	0.7	0.5	0.0	0.2	1.4	1.5	0.2	0.6
7	0.9	0.1	0.8	1.4	0.3	0.1	0.5	0.5	1.1	0.9	0.1	0.4
8	0.8	0.2	0.3	1.2	0.1	0.1	1.1	0.7	0.4	0.8	0.2	0.7
9	0.5	0.5	0.1	0.7	0.5	1.1	0.9	0.3	1.1	1.1	0.1	0.5
10	0.1	0.0	0.0	0.7	0.5	1.3	0.6	0.4	0.7	0.5	0.1	0.6
11	0.1	0.0	0.4	0.4	0.0	1.1	0.6	2.0	0.7	0.7	1.2	0.5
12	0.4	0.2	0.9	0.7	0.6	1.0	0.4	2.0	0.1	0.2	1.1	0.7
13	1.2	1.3	0.7	0.4	1.6	0.6	0.6	0.1	0.9	0.1	0.4	1.0
14	1.2	1.4	1.2	0.0	1.2	0.2	0.5	0.2	0.9	0.0	0.1	1.5
15	0.7	1.0	0.5	0.4	0.9	0.3	0.0	0.6	0.9	0.9	0.3	2.0
16	1.4	1.1	0.9	1.4	0.6	0.1	0.1	0.5	0.9	1.2	1.4	0.9
17	1.3	0.5	0.9	1.8	1.1	0.6	1.4	0.6	0.8	1.1	1.2	0.1
18	1.4	0.7	0.0	1.4	0.9	0.4	1.1	0.9	1.0	1.0	1.0	0.5
19	1.2	0.2	1.3	1.0	0.6	0.1	0.4	1.6	1.8	0.4	0.1	0.8
20	0.9	0.7	1.7	1.0	0.8	0.1	0.2	1.0	1.5	0.5	0.1	0.9
21	0.7	1.6	1.7	0.9	1.5	0.2	0.2	0.4	1.0	0.2	0.7	1.0
22	0.8	1.4	1.7	0.9	1.3	0.6	1.1	0.3	0.7	1.3	1.3	1.1
23	0.5	1.4	1.1	0.9	0.6	1.1	1.6	0.7	0.9	1.3	0.7	0.9
24	0.2	0.5	0.0	0.8	1.5	0.9	1.1	0.5	1.6	0.3	0.6	1.1
25	0.0	0.0	0.7	0.3	1.0	1.0	0.3	0.6	1.1	0.0	0.5	0.6
26	0.0	0.2	0.4	0.0	1.2	1.0	0.2	1.0	0.7	1.1	0.5	0.0
27	0.0	1.2	1.2	0.4	0.9	0.4	0.2	0.5	0.3	1.2	0.1	0.2
28	0.7	1.9	1.4	0.2	0.1	0.7	0.1	1.1	0.1	1.3	0.1	0.1
29	0.8		1.0	0.8	0.1	0.7	0.4	0.8	0.2	0.9	0.3	0.1
30	0.5		1.0	0.6	0.2	0.1	0.3	0.6	0.1	0.6	0.6	0.2
31	1.6		1.0		0.2		0.4	0.2		0.7		0.1

Greenwich	Month											
mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1920							
1	0.9	0.1	0.5	0.1	1.2	0.3	0.5	0.2	1.0	1.3	0.7	0.0
2	0.9	0.0	0.1	0.2	0.9	0.1	0.0	0.0	0.4	0.9	0.7	0.8
3	0.3	0.1	0.0	0.4	1.0	0.2	0.1	0.7	1.6	0.3	0.7	0.9
4	0.1	0.1	1.7	1.0	0.4	1.0	0.1	1.1	1.4	0.9	1.0	1.7
5	0.0	0.1	1.9	1.3	0.1	0.3	0.1	0.6	0.9	0.6	1.0	1.4
6	0.4	0.4	1.1	1.0	0.1	0.8	1.0	0.0	0.2	0.9	1.3	1.1
7	0.9	1.0	0.6	0.9	0.0	0.1	1.2	0.5	0.7	0.9	0.8	0.7
8	0.5	0.5	0.9	0.7	0.5	0.0	1.0	1.1	1.4	0.6	0.1	0.9
9	1.1	0.1	0.1	0.4	1.1	0.8	0.6	1.1	1.4	0.7	0.1	0.7
10	1.1	0.1	0.8	0.5	0.2	1.6	0.1	0.8	1.0	1.5	0.1	0.3
11	1.3	0.5	0.6	0.1	0.0	1.1	0.5	0.4	0.9	0.4	0.2	0.1
12	0.7	0.8	0.9	0.2	0.1	0.3	1.1	1.4	0.1	0.4	0.8	0.1
13	0.0	0.7	0.2	0.2	1.6	0.2	0.3	0.9	0.8	0.3	0.5	0.8
14	0.6	0.9	1.8	0.2	1.1	0.0	0.7	1.0	0.8	0.1	0.1	0.8
15	0.8	0.6	1.0	1.9	1.2	0.4	1.4	0.6	1.1	0.2	0.8	0.8
16	0.6	1.6	1.1	0.8	0.8	0.2	1.0	0.2	0.9	0.4	0.4	0.5
17	0.8	1.4	0.5	1.4	0.4	0.2	0.6	0.1	1.1	0.6	1.1	0.1
18	0.3	0.9	0.3	1.2	0.3	0.2	0.9	0.9	0.7	0.2	0.9	0.5
19	0.2	0.1	0.1	0.9	0.2	0.4	0.2	0.8	0.4	0.2	0.2	0.3
20	0.2	0.2	0.3	1.0	0.4	0.5	0.5	0.6	0.2	0.1	0.4	0.9
21	1.2	0.7	0.7	0.8	0.5	0.2	0.1	1.2	0.2	0.1	1.0	0.1
22	0.7	0.1	2.0	0.2	0.1	0.1	0.8	1.3	1.7	0.7	0.8	0.0
23	0.9	0.1	2.0	0.8	0.1	0.2	1.1	0.6	0.9	0.9	0.1	0.5
24	0.7	1.6	1.8	1.1	0.3	0.7	0.7	0.3	0.3	1.0	0.1	0.9
25	0.3	0.8	1.1	0.1	0.5	0.3	0.5	0.2	0.3	1.3	0.1	1.1
26	0.5	0.5	0.6	0.2	0.6	0.4	0.5	0.2	0.1	0.9	1.6	1.7
27	0.0	0.8	0.8	0.2	0.9	0.2	0.0	0.1	1.1	1.1	1.2	1.1
28	1.0	0.5	0.6	0.0	1.3	0.8	0.0	0.1	1.9	0.9	0.2	0.6
29	0.8	0.0	0.1	0.5	1.0	0.8	0.0	0.4	1.7	0.9	0.2	0.1
30	1.0		0.1	1.0	0.6	0.7	0.1	1.0	1.1	0.0	0.1	0.1
31	0.3		0.1		0.2		0.1	0.4		0.7		0.7

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1921							
1	0.9	0.9	1.0	0.2	0.4	0.5	0.5	0.0	0.2	0.9	0.7	0.2
2	0.2	0.9	0.9	0.1	0.2	0.4	0.1	0.7	1.8	0.3	0.0	0.7
3	0.3	0.2	0.6	0.8	0.8	0.8	0.2	1.2	0.7	0.2	0.1	0.7
4	0.8	0.4	0.3	0.1	0.8	1.0	0.7	0.9	0.8	0.8	0.0	0.3
5	0.7	1.2	0.1	0.1	0.0	0.1	0.1	1.1	0.4	1.0	1.0	0.1
6	0.3	0.9	0.2	0.3	0.1	1.1	0.7	1.1	0.1	0.8	1.3	0.0
7	0.4	0.4	0.3	0.1	0.0	0.8	1.0	0.8	0.7	1.0	0.7	0.0
8	0.2	0.1	0.1	0.6	0.6	1.2	1.0	0.7	1.1	1.9	0.7	0.2
9	0.8	0.1	0.9	0.8	0.9	1.0	1.2	0.2	0.6	1.0	0.7	0.3
10	1.0	0.3	1.0	0.8	0.7	0.9	0.4	0.3	0.3	0.6	1.0	0.6
11	0.3	0.3	0.3	0.6	0.4	0.4	0.1	1.0	0.1	1.4	0.1	0.8
12	0.6	0.1	0.6	1.2	1.4	0.2	0.5	0.5	0.0	1.1	0.2	1.4
13	0.1	0.9	0.2	1.6	1.9	0.4	0.7	0.2	0.1	0.2	0.8	1.6
14	0.2	0.8	0.9	1.0	2.0	0.9	0.7	0.6	0.2	0.5	0.7	0.8
15	0.8	0.2	1.3	0.8	2.0	0.2	0.9	1.0	0.4	0.6	0.4	0.6
16	0.7	0.1	1.0	0.6	2.0	0.4	1.0	1.0	0.6	0.1	1.6	1.3
17	1.4	0.8	0.2	0.4	1.6	0.6	0.3	0.7	0.2	0.1	1.7	1.0
18	0.7	0.5	0.3	1.4	0.9	0.1	0.3	0.1	0.5	0.1	1.2	0.5
19	0.4	0.9	0.1	1.2	1.6	0.2	0.7	0.1	0.6	0.1	1.0	0.1
20	0.7	0.6	0.1	1.0	1.8	0.6	0.6	0.3	0.1	0.4	0.5	0.0
21	0.6	0.8	1.4	1.2	1.3	0.4	0.1	0.5	0.5	1.1	0.8	0.0
22	0.2	0.4	1.3	0.9	0.8	0.8	0.6	0.2	0.2	0.6	0.7	0.9
23	0.3	0.1	0.3	0.8	0.6	0.9	0.8	0.1	1.1	0.4	1.1	1.0
24	0.9	0.3	0.9	0.4	0.3	0.4	0.4	0.2	0.0	0.5	0.5	0.7
25	0.3	0.4	1.3	0.3	0.1	0.1	0.1	0.0	0.0	0.2	0.4	0.1
26	0.7	0.4	1.2	0.1	0.4	0.7	0.6	1.1	0.0	0.2	0.2	0.8
27	0.3	0.4	1.3	0.1	0.6	0.3	0.4	0.9	0.2	1.0	0.1	0.9
28	0.4	0.8	0.7	0.6	0.8	0.3	0.6	0.2	1.4	0.9	0.3	1.7
29	0.3		1.2	1.7	0.6	0.7	0.7	0.0	1.5	0.8	0.0	1.3
30	0.2		0.8	0.5	0.1	0.3	0.7	1.2	0.7	0.2	0.1	0.8
31	0.8		0.2		0.2		0.2	0.8		0.9		0.4

Greenwich mean day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1922							
1	0.2	0.7	1.2	1.0	0.2	0.2	1.2	0.6	0.5	0.2	1.2	0.8
2	0.4	0.6	1.0	0.8	0.0	1.1	0.9	0.3	0.3	0.8	1.2	0.5
3	0.1	1.4	1.1	0.2	0.0	1.1	1.0	0.2	0.5	1.0	1.2	0.1
4	0.2	1.1	0.7	0.0	0.3	0.7	0.5	0.4	0.4	0.9	0.7	0.1
5	0.4	0.8	1.5	0.0	0.7	1.3	0.3	0.9	0.3	1.9	0.2	0.9
6	0.7	0.9	0.3	0.0	0.7	1.0	0.4	0.5	0.7	1.3	0.0	0.9
7	1.1	0.2	0.1	0.1	1.3	0.5	0.5	0.2	1.4	1.2	0.0	0.3
8	1.5	1.0	0.1	1.1	1.3	0.3	0.1	0.3	1.5	1.1	0.3	0.0
9	1.3	1.2	0.1	1.3	1.3	0.3	0.2	1.1	1.2	0.9	0.4	0.4
10	1.1	0.5	1.2	1.2	1.1	0.1	0.5	1.1	1.1	0.7	1.1	1.0
11	0.8	0.2	0.8	0.8	0.8	0.2	0.1	1.6	0.6	0.2	0.2	0.8
12	0.4	1.2	1.1	1.3	0.2	0.7	0.0	1.4	0.5	0.5	0.1	0.4
13	0.2	0.8	1.8	0.8	0.2	0.6	0.2	1.3	0.9	0.5	0.0	0.3
14	0.1	1.0	1.9	0.8	0.3	0.4	1.0	1.3	1.9	0.7	0.2	1.1
15	0.0	1.4	0.7	0.7	0.1	0.0	1.0	0.9	1.1	0.4	0.6	0.9
16	1.2	1.5	0.4	0.6	1.4	1.3	1.2	0.5	0.4	0.1	0.2	0.0
17	1.1	0.9	1.1	0.5	0.7	1.1	0.8	0.1	0.6	0.9	0.4	0.0
18	0.9	0.5	0.9	0.5	0.3	0.9	0.8	0.1	0.4	0.2	0.1	0.1
19	0.8	0.5	1.1	0.1	0.6	0.6	0.9	0.3	0.2	0.1	0.2	0.1
20	0.8	0.7	0.9	0.5	0.4	0.4	0.5	0.6	1.4	1.0	0.2	0.1
21	0.0	0.8	0.4	1.1	1.2	0.5	0.1	0.9	1.1	0.4	0.6	0.1
22	0.0	0.4	0.7	1.6	0.9	0.4	0.1	0.8	0.2	0.0	0.4	0.0
23	0.1	0.1	0.1	1.0	0.8	0.6	0.5	1.2	0.2	0.3	0.1	0.1
24	1.8	0.1	0.1	1.3	0.8	0.1	0.8	0.9	0.1	0.9	0.2	0.4
25	1.5	0.0	1.2	1.1	0.8	0.2	0.1	0.7	0.3	0.9	0.1	0.8
26	0.9	0.8	0.5	1.4	0.9	0.2	1.5	0.8	0.1	0.3	0.0	1.3
27	0.5	1.0	0.4	1.1	0.7	0.7	1.4	0.9	1.1	0.7	1.0	0.3
28	0.2	1.0	0.4	0.6	0.4	0.9	1.5	0.3	1.1	0.5	1.0	0.3
29	0.3		0.8	0.9	0.0	1.4	1.2	0.8	0.4	0.4	1.3	0.5
30	0.4		1.4	0.6	0.0	1.4	0.9	0.8	1.0	0.9	0.9	0.6
31	1.3		1.1		0.0		0.7	0.8		1.6		0.2

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1923											
1	0.2	0.8	0.4	0.2	0.1	0.2	0.5	0.1	0.6	0.4	0.8	0.4
2	0.2	0.5	0.3	0.1	0.1	0.2	0.8	0.3	0.4	0.0	1.3	0.0
3	0.3	0.7	0.2	0.1	1.0	0.5	0.2	1.1	0.7	0.0	0.8	0.3
4	0.6	0.7	0.2	0.2	0.8	1.0	0.1	0.9	0.3	0.0	0.1	1.0
5	0.5	0.2	0.1	0.0	0.5	0.9	0.1	0.3	0.1	0.3	0.1	0.3
6	0.5	0.6	0.1	0.1	0.2	0.7	0.8	0.8	0.0	0.4	0.3	0.1
7	0.1	0.8	0.6	0.3	0.4	0.2	0.9	0.3	0.0	0.1	0.6	0.2
8	0.1	0.6	0.1	0.6	0.8	0.1	0.5	0.2	0.0	0.5	0.1	0.2
9	0.3	0.1	0.1	0.6	0.3	0.1	0.3	0.3	0.9	0.2	0.1	1.0
10	0.5	0.8	0.1	0.9	0.3	0.1	1.4	0.2	0.9	0.8	0.1	0.8
11	0.3	0.4	0.1	0.8	0.1	0.3	0.9	0.1	0.5	0.9	0.1	0.2
12	0.3	0.1	0.2	0.9	0.1	0.8	0.6	0.5	0.2	0.7	0.9	0.2
13	1.0	0.1	0.2	1.1	0.1	1.7	0.2	0.9	0.5	0.1	0.7	0.6
14	0.7	0.8	0.8	0.8	0.4	1.2	0.0	0.7	0.7	0.7	0.2	0.8
15	0.4	0.1	1.0	0.3	0.3	0.9	0.1	0.7	0.3	1.9	0.0	0.5
16	0.5	0.7	0.9	0.1	0.2	0.3	0.2	0.3	0.0	2.0	0.3	0.2
17	0.3	1.1	0.6	0.1	1.6	0.1	0.3	0.1	0.4	1.6	0.2	0.0
18	0.1	0.9	0.6	0.1	1.3	0.1	0.9	0.0	0.7	1.4	0.1	0.3
19	0.1	0.4	0.4	0.2	0.9	0.3	0.7	0.3	0.2	1.0	0.1	0.4
20	1.3	0.3	0.6	0.9	0.7	0.6	0.3	0.3	0.3	0.6	0.0	0.2
21	1.0	0.1	0.6	1.2	0.5	1.0	0.0	0.0	0.0	0.2	0.6	0.2
22	0.9	0.1	0.2	1.2	0.1	0.4	0.6	0.2	0.0	0.3	0.8	0.1
23	0.9	0.1	0.0	1.0	0.2	0.3	1.1	0.2	0.3	0.0	0.5	1.0
24	0.8	0.1	1.9	0.8	0.1	0.0	0.0	0.7	0.5	0.0	0.1	1.1
25	0.2	1.8	1.8	0.2	0.3	0.1	0.1	0.5	0.3	0.3	0.0	1.0
26	0.2	1.6	1.4	0.1	0.2	0.2	0.1	0.1	1.7	0.4	0.1	1.6
27	0.0	1.7	1.1	0.1	0.3	0.7	0.6	0.3	2.0	0.9	1.1	1.1
28	0.1	1.0	0.8	0.1	0.1	0.7	0.3	0.1	1.2	0.2	0.8	0.9
29	1.1		0.6	0.2	1.2	0.2	0.2	0.0	0.8	0.1	1.1	0.4
30	0.9		0.3	0.2	1.1	1.2	0.1	0.1	0.7	0.0	0.8	0.3
31	0.6		0.4		0.3		0.1	0.5		0.8		0.2

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1924											
1	0.0	0.3	0.0	0.1	0.3	0.2	0.3	0.5	1.4	0.1	1.0	0.0
2	0.2	0.3	0.8	0.0	0.1	0.1	0.4	0.4	0.1	0.1	0.7	0.1
3	1.2	0.5	1.0	0.7	0.2	0.0	0.0	0.4	0.4	0.1	0.6	0.2
4	0.3	0.2	0.4	0.1	0.2	0.3	0.1	0.8	0.8	1.0	0.2	0.2
5	0.2	1.5	0.7	0.1	0.2	0.2	0.1	1.0	0.9	0.5	0.0	0.0
6	0.2	1.0	0.9	1.1	0.0	0.0	0.6	0.8	1.0	0.4	0.9	0.0
7	0.6	0.8	1.3	1.0	0.0	0.1	0.8	0.5	1.7	0.9	0.3	0.6
8	0.6	0.2	1.1	0.3	0.3	0.1	0.2	0.4	1.7	0.6	0.0	0.6
9	0.4	0.1	1.0	0.2	0.4	1.0	1.5	0.1	0.9	0.2	0.9	0.3
10	1.6	0.8	0.7	0.1	0.1	2.0	0.9	0.1	0.8	0.1	0.7	0.2
11	0.8	0.7	0.5	0.0	0.3	1.9	0.6	0.1	0.1	0.1	0.2	0.6
12	0.2	0.1	0.5	0.2	0.9	0.8	0.2	0.0	1.1	0.0	0.3	1.4
13	0.0	0.2	0.1	0.0	0.5	0.6	0.4	0.2	0.8	0.1	1.0	0.7
14	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.1	0.2	0.0	0.6	0.3
15	0.6	0.0	0.1	0.5	0.1	0.6	1.0	0.1	0.6	0.6	0.5	0.6
16	0.8	0.8	0.5	0.2	0.8	0.8	0.6	0.3	0.1	0.9	0.1	0.0
17	0.6	0.6	0.0	0.7	0.4	0.4	0.6	1.2	0.2	0.5	0.1	0.6
18	0.2	0.0	0.5	0.6	0.0	1.5	0.8	1.2	0.4	1.1	0.0	0.5
19	0.5	0.3	0.9	0.5	0.2	1.6	0.7	0.4	0.5	0.1	1.6	0.6
20	0.0	1.7	1.0	0.4	0.4	1.2	1.0	0.0	0.1	0.5	0.3	1.2
21	0.2	1.2	1.0	0.6	1.8	0.9	1.0	0.0	0.3	0.7	0.6	1.2
22	1.3	1.0	1.0	0.4	2.0	0.9	0.3	0.2	0.4	0.4	0.1	0.4
23	1.6	1.2	0.9	0.3	1.7	0.9	0.0	0.3	1.1	1.8	0.1	0.8
24	1.1	0.8	0.3	0.4	1.0	0.4	0.0	0.1	1.4	1.9	1.9	0.4
25	0.8	0.8	0.4	1.2	0.8	0.4	1.0	0.0	0.6	1.1	0.6	0.0
26	0.9	0.8	0.2	1.2	0.4	0.3	1.3	0.2	0.4	0.2	1.0	0.1
27	0.3	0.3	0.3	0.5	0.6	0.4	1.4	0.1	1.2	1.0	0.4	0.2
28	0.3	0.0	0.1	0.4	1.4	0.3	0.7	0.2	0.8	0.4	0.9	0.1
29	2.0	0.0	0.8	0.6	0.7	0.4	0.2	1.2	0.3	0.0	0.5	0.0
30	1.8		1.7	0.1	0.6	0.7	0.0	1.1	0.2	0.0	0.1	0.0
31	0.6		1.0		0.1		0.0	0.7		0.8		0.4

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1925											
1	0.1	0.7	0.9	0.7	0.1	0.9	0.7	0.5	1.6	0.8	1.3	0.5
2	0.1	0.1	0.1	0.8	0.0	0.9	0.5	0.2	1.6	0.3	1.1	0.4
3	0.5	0.0	0.1	1.1	0.4	1.0	0.4	1.0	1.0	0.1	0.2	0.1
4	0.0	0.0	0.4	0.1	1.8	0.8	0.2	0.9	0.8	1.1	0.1	0.4
5	0.7	0.1	0.9	0.9	1.0	0.5	0.5	0.3	0.7	0.9	0.0	0.9
6	0.0	0.3	0.4	0.7	0.3	1.0	0.3	0.6	0.5	0.7	0.2	1.4
7	0.2	0.5	0.1	0.7	0.4	0.3	0.1	1.3	1.1	0.4	0.2	0.9
8	0.1	1.0	0.1	0.6	0.6	0.2	0.2	1.3	0.2	1.2	1.1	0.4
9	0.2	1.5	1.5	1.0	0.8	0.1	0.9	0.9	0.5	1.6	1.7	0.5
10	0.0	0.3	1.0	1.1	0.1	0.3	1.0	0.6	0.0	1.0	1.5	0.6
11	0.0	0.2	0.4	0.8	0.0	0.5	0.6	0.1	0.0	1.1	1.1	0.5
12	0.1	0.6	0.2	0.9	0.0	0.3	0.1	0.0	0.0	1.5	0.4	0.2
13	1.0	0.5	0.1	0.1	0.1	1.9	0.1	0.0	0.1	0.9	0.9	0.5
14	0.1	0.4	0.1	0.1	0.0	0.8	0.7	0.3	1.7	0.7	1.4	0.1
15	0.1	0.1	1.4	1.0	0.0	0.5	1.3	0.1	1.8	0.9	0.7	0.9
16	1.5	0.6	0.4	0.6	0.0	0.9	0.1	0.3	1.1	0.7	0.1	0.6
17	1.4	0.7	0.2	0.1	0.1	0.9	0.0	0.8	0.9	0.4	0.1	0.0
18	1.0	0.3	0.0	0.1	0.8	0.6	0.1	1.1	0.5	0.0	0.1	1.0
19	1.8	0.7	0.3	0.0	0.8	0.2	0.4	0.8	0.2	0.3	0.1	0.3
20	1.3	0.7	0.8	1.1	0.1	0.0	0.1	0.3	0.2	0.8	0.3	0.7
21	0.9	0.0	0.2	0.3	0.1	0.0	0.9	0.3	1.9	1.7	0.0	0.0
22	0.2	0.0	0.3	0.2	0.4	0.3	1.0	1.5	1.1	1.5	0.1	0.1
23	1.1	0.0	0.6	0.2	0.2	1.3	0.7	1.8	0.8	1.9	0.2	0.6
24	0.9	0.7	0.5	0.1	0.5	1.9	0.4	0.6	1.8	1.8	0.9	0.8
25	0.0	0.8	0.1	0.0	0.4	1.3	0.9	0.7	0.6	0.7	0.5	0.4
26	0.1	0.1	0.5	0.4	0.5	0.5	1.7	0.5	0.5	0.4	0.1	0.0
27	0.1	0.0	0.9	0.7	0.8	1.2	1.4	0.1	0.1	0.9	0.0	1.5
28	0.0	0.8	0.0	0.3	1.3	1.3	1.1	0.0	0.1	0.2	0.0	1.7
29	0.1		0.5	0.5	0.5	0.8	0.4	0.4	0.0	0.0	0.0	0.5
30	0.3		0.1	0.2	1.4	0.8	0.0	0.9	0.0	0.0	0.0	0.6
31	0.0		0.1		1.3		0.1	0.6		0.9		0.5

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1926											
1	0.7	0.7	1.0	0.5	0.0	1.9	0.2	1.3	0.0	0.1	1.0	0.2
2	0.9	1.1	1.1	0.2	0.0	1.8	0.6	0.5	0.2	0.3	0.9	0.2
3	0.4	1.2	0.9	0.4	0.8	0.4	0.3	0.8	0.1	0.9	1.1	0.7
4	1.0	0.9	0.7	0.2	1.7	0.1	0.4	0.5	0.0	1.0	0.3	0.7
5	0.3	0.4	2.0	0.3	1.4	0.3	1.1	0.3	0.0	0.4	0.1	0.2
6	0.4	0.0	1.3	1.2	1.2	0.5	0.7	0.2	0.8	0.4	0.6	0.2
7	1.0	0.0	0.9	1.2	0.9	0.9	1.0	0.1	0.5	0.8	0.0	0.3
8	0.6	0.0	0.2	1.1	0.6	1.4	0.6	0.0	1.6	0.5	0.0	0.0
9	0.4	0.0	1.8	1.1	0.9	1.0	0.2	0.9	1.7	0.3	0.0	0.0
10	0.4	1.0	1.4	0.7	1.5	0.7	0.2	0.7	1.1	0.0	0.0	0.7
11	0.7	1.3	1.2	0.4	1.1	0.3	0.1	0.1	1.0	0.7	0.5	0.6
12	0.7	0.9	0.8	0.8	1.0	0.0	0.6	0.8	0.7	0.4	0.6	0.5
13	1.4	1.0	0.3	0.6	1.1	0.2	0.5	1.5	0.2	1.2	0.1	0.4
14	1.3	0.9	0.3	2.0	0.3	0.3	0.1	0.7	1.5	1.9	0.0	0.1
15	1.3	1.2	0.1	2.0	0.0	0.7	0.3	0.7	1.8	2.0	0.0	0.9
16	1.1	0.3	0.8	1.5	0.3	0.6	0.4	0.8	1.4	1.8	0.0	1.0
17	0.4	1.3	0.8	1.1	0.9	0.3	0.5	0.9	0.7	0.9	0.0	0.7
18	1.4	1.5	1.4	0.4	0.9	0.4	0.9	1.0	1.0	0.6	0.4	0.3
19	1.1	0.7	1.0	0.5	0.6	0.2	0.4	0.9	1.4	1.3	0.5	0.1
20	0.3	0.4	1.1	0.1	1.0	0.0	0.1	0.4	1.7	0.7	0.1	1.0
21	0.0	0.8	1.2	0.9	0.8	0.2	0.1	0.1	1.9	0.1	1.2	0.7
22	1.8	0.9	1.0	1.1	0.3	0.2	0.1	0.1	1.1	0.0	0.6	0.3
23	1.7	2.0	0.4	1.0	0.3	1.0	0.0	0.0	0.8	0.0	0.7	1.6
24	0.4	2.0	0.6	1.0	0.1	0.8	0.7	0.3	0.4	0.5	0.6	0.9
25	0.3	1.5	0.3	0.6	0.3	0.0	0.2	0.3	0.4	1.5	0.1	0.4
26	2.0	1.0	0.2	0.9	0.0	0.0	0.3	0.3	0.1	0.3	0.3	0.3
27	1.9	0.3	0.5	0.5	0.1	0.1	1.0	0.1	0.0	0.5	0.1	0.9
28	0.9	0.4	1.0	0.1	0.1	0.5	1.4	0.2	0.0	0.5	1.5	0.9
29	0.5		1.0	0.0	0.1	0.7	0.2	0.2	0.0	0.8	1.6	1.0
30	0.3		1.0	0.0	0.2	0.1	0.7	0.3	0.0	0.2	0.7	0.2
31	0.5		0.2		0.0		1.6	0.5		0.3		0.7

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1927							
1	1.3	0.4	1.2	0.5	0.4	0.9	1.0	0.7	1.2	0.3	0.0	0.8
2	0.7	0.2	0.3	0.5	0.5	1.0	0.6	1.0	0.5	0.9	0.0	0.9
3	0.1	0.9	0.4	0.3	1.3	0.6	0.1	0.9	0.6	0.8	0.1	0.2
4	1.5	0.4	0.2	1.0	1.0	0.3	0.2	0.8	1.4	0.1	0.5	0.0
5	1.0	0.4	0.5	0.7	1.8	1.1	0.6	0.8	0.9	0.9	0.2	0.9
6	0.8	0.0	0.6	0.2	0.6	0.6	0.7	0.1	1.2	1.0	0.1	1.0
7	1.9	0.0	0.5	0.9	1.6	0.3	1.0	0.2	1.2	1.5	0.0	0.7
8	1.1	0.8	0.7	0.9	1.0	0.0	0.9	0.3	1.2	1.3	0.6	0.7
9	0.1	1.5	1.4	1.4	0.9	0.1	0.1	0.2	1.4	1.0	0.4	0.7
10	0.1	1.2	1.3	0.8	0.3	0.7	0.0	0.2	1.6	1.8	0.2	0.6
11	0.8	0.5	0.8	1.5	0.0	1.0	0.2	0.3	1.0	0.9	0.2	0.1
12	0.8	1.0	0.5	1.0	0.0	1.0	0.2	0.2	0.5	2.0	0.2	0.3
13	0.5	1.1	0.8	0.9	0.3	0.3	0.3	0.0	0.9	1.7	0.5	1.7
14	0.7	0.6	0.8	1.9	0.5	0.5	0.2	0.4	1.0	0.7	0.0	1.4
15	0.3	0.4	1.1	0.9	1.2	0.6	0.1	0.8	0.8	0.4	0.0	1.2
16	0.2	1.1	1.8	0.1	0.9	0.2	0.1	0.7	0.2	0.3	0.4	0.7
17	0.6	0.7	1.6	0.0	0.1	0.6	0.9	0.2	0.2	0.1	0.2	1.3
18	0.6	0.9	1.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	1.5	1.2
19	0.8	0.7	0.9	0.1	1.0	0.0	0.7	0.9	0.2	0.5	0.8	1.1
20	0.1	0.4	1.0	0.1	1.4	0.0	0.7	2.0	0.7	0.5	0.7	0.0
21	0.0	0.1	0.2	0.0	0.6	0.1	1.6	2.0	0.4	0.1	0.8	0.0
22	0.0	0.0	0.1	0.0	0.4	0.3	2.0	0.8	0.1	2.0	0.1	0.1
23	0.1	0.0	0.1	0.9	0.3	0.2	1.1	0.5	0.0	1.9	0.0	0.5
24	1.1	1.4	0.0	1.2	0.2	0.0	0.8	0.2	0.1	1.0	0.4	0.1
25	1.1	1.1	0.1	0.9	0.3	0.1	0.4	0.0	1.0	0.8	0.0	0.1
26	1.1	1.0	1.3	0.2	0.1	1.3	0.7	0.0	1.0	0.9	0.3	0.3
27	0.3	0.6	1.7	0.1	1.0	0.7	0.8	0.3	0.8	0.3	0.5	0.1
28	0.2	1.1	1.6	0.0	1.2	0.3	0.2	0.2	0.7	0.3	0.1	1.3
29	0.6		0.9	0.3	0.4	0.3	0.1	1.5	1.0	0.7	0.8	0.5
30	0.3		0.8	0.5	0.2	0.7	0.3	1.5	0.9	0.8	0.9	0.1
31	0.1		0.6		0.2		0.3	0.9		0.1		0.8

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1928							
1	1.1	0.7	0.1	1.0	0.1	0.9	0.4	0.7	0.4	0.5	0.6	0.9
2	0.2	0.8	0.0	0.7	0.0	0.8	1.3	0.4	0.8	1.2	1.3	0.4
3	0.1	0.8	0.1	0.9	0.0	0.7	0.9	0.3	1.5	0.8	1.7	0.2
4	0.6	0.7	0.0	0.8	0.3	0.8	0.8	1.1	0.4	0.4	1.1	0.1
5	0.3	0.4	0.0	0.6	1.2	1.1	0.7	1.7	0.7	1.0	0.1	1.2
6	0.3	0.4	0.1	0.8	0.5	0.8	0.7	1.1	0.5	0.8	0.5	1.5
7	0.4	0.5	0.3	1.3	0.6	1.1	1.5	1.1	1.6	0.8	0.4	0.8
8	0.2	0.1	0.1	0.9	0.9	1.0	2.0	0.3	1.5	0.5	0.0	0.5
9	0.4	0.1	0.0	0.7	0.3	0.7	1.2	0.2	1.1	0.0	0.0	0.3
10	0.2	0.2	0.5	1.0	1.4	0.0	1.0	0.1	0.8	0.4	1.2	0.4
11	0.0	0.0	1.8	0.1	1.3	0.1	0.9	0.4	0.7	0.4	1.2	0.9
12	0.0	0.9	1.3	0.1	1.4	1.2	0.6	1.1	0.3	0.5	0.9	1.1
13	0.1	1.0	1.3	0.1	1.1	1.3	0.1	0.6	0.7	0.9	1.6	0.9
14	0.0	0.8	1.2	0.1	0.9	1.1	0.3	0.1	0.9	0.8	0.6	0.7
15	0.3	0.7	0.7	0.7	1.0	0.6	0.1	0.1	0.4	0.7	1.3	0.4
16	0.2	0.7	0.7	0.9	1.1	0.3	0.2	0.3	0.0	1.0	1.2	0.3
17	0.1	0.2	0.6	0.7	0.9	0.3	0.2	0.3	0.1	0.8	1.3	0.0
18	0.5	0.9	0.3	0.1	1.0	0.3	0.7	0.5	1.5	2.0	0.8	0.3
19	0.4	0.9	0.4	0.6	0.8	0.3	0.4	0.2	1.4	1.2	0.7	0.0
20	0.8	0.9	0.3	0.9	0.4	0.8	0.2	0.1	0.6	0.8	0.2	0.1
21	0.5	1.1	0.5	1.0	0.2	0.6	1.0	0.1	0.2	0.9	0.1	0.8
22	0.4	0.5	0.6	0.5	0.1	1.7	1.3	0.0	0.9	1.1	0.0	0.7
23	0.8	0.7	0.9	0.5	0.2	1.2	0.6	0.8	0.8	0.4	0.2	0.1
24	0.5	0.0	0.8	0.1	0.3	0.9	0.7	0.5	1.1	1.7	0.8	0.7
25	0.6	0.9	0.8	0.1	0.3	0.7	0.5	0.5	1.6	1.8	0.6	0.8
26	0.5	1.0	0.5	0.2	0.1	0.4	0.7	1.7	0.8	1.1	0.3	0.9
27	1.6	0.8	0.1	0.2	1.7	0.3	0.6	1.6	0.6	1.0	0.4	0.3
28	1.1	0.7	0.3	0.0	1.9	0.6	0.9	0.9	0.1	0.3	0.0	0.2
29	0.9	0.3	0.2	0.0	1.7	0.5	0.4	0.3	0.2	0.7	0.0	0.6
30	0.7		0.4	0.1	0.9	0.4	0.2	0.0	0.6	0.8	0.4	0.4
31	0.1		0.1		0.8		1.1	0.4		0.6		0.2

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1929											
1	0.0	0.5	0.8	0.6	0.8	0.5	0.9	1.8	0.5	0.2	1.2	0.1
2	0.1	0.2	0.6	0.4	0.8	0.6	0.6	1.2	0.5	0.3	1.3	0.2
3	0.8	0.1	0.9	0.4	0.8	0.3	0.5	0.3	0.1	0.6	1.9	1.4
4	1.0	0.0	0.4	1.4	0.5	0.1	0.4	0.5	0.1	0.9	1.4	1.6
5	1.3	0.2	1.1	0.6	0.3	0.0	1.3	1.0	0.1	0.4	1.3	1.5
6	0.7	1.3	0.2	0.3	0.3	0.2	1.2	0.0	0.5	0.5	1.2	1.2
7	0.1	0.9	0.7	0.3	0.4	0.5	0.6	0.0	1.6	1.8	1.2	0.8
8	1.1	0.9	1.3	0.4	0.4	0.8	0.3	0.0	0.7	1.8	0.6	0.8
9	1.5	1.3	0.8	0.1	0.4	1.0	0.2	0.0	1.0	1.5	0.9	0.8
10	1.1	1.1	0.4	0.5	0.1	1.5	1.9	0.1	1.6	1.0	0.1	0.7
11	0.8	0.8	1.4	0.7	0.3	1.2	1.0	1.2	1.4	0.7	0.1	1.1
12	0.1	0.4	2.0	0.3	0.9	0.6	0.3	0.5	1.2	0.9	0.2	1.0
13	0.5	0.3	1.3	0.3	1.5	0.3	0.2	0.2	1.1	1.1	0.4	0.3
14	1.1	0.1	0.9	0.1	1.1	0.0	1.1	1.8	1.5	0.5	0.3	0.4
15	0.5	0.1	1.7	0.9	1.1	0.3	1.6	1.5	1.0	0.2	1.0	0.3
16	0.3	1.0	1.4	1.6	1.1	0.4	1.6	1.0	0.9	1.8	1.6	1.7
17	0.0	1.8	1.0	1.3	0.7	0.3	1.0	0.7	0.5	1.7	0.2	1.4
18	0.0	1.4	0.5	0.7	0.2	0.1	0.4	1.2	0.5	1.4	0.1	0.7
19	0.0	1.3	0.6	0.3	0.4	0.3	0.0	1.1	0.1	1.3	0.3	0.1
20	0.3	0.6	1.1	0.1	0.4	0.4	0.9	0.4	0.4	1.0	0.9	0.1
21	0.6	0.6	1.4	0.5	0.1	0.6	0.7	0.3	1.0	0.5	0.7	0.1
22	0.6	1.1	1.0	0.2	0.2	1.2	0.7	0.1	1.6	0.7	0.3	1.4
23	0.0	0.8	0.6	0.0	1.1	1.2	0.2	0.1	0.7	0.5	0.2	0.9
24	0.1	0.4	0.8	0.0	0.5	1.0	0.8	0.3	0.5	0.9	0.1	0.6
25	0.0	0.6	0.6	0.4	0.8	0.6	0.4	0.0	0.7	0.5	0.2	0.4
26	0.3	1.1	0.4	0.4	0.4	0.0	0.3	0.4	0.7	0.0	0.8	0.3
27	0.1	1.9	0.6	0.4	0.4	0.3	0.1	0.3	1.1	0.2	1.0	0.2
28	0.2	1.9	0.7	0.9	1.0	0.9	0.0	0.1	0.2	0.3	0.6	0.4
29	0.7		0.6	1.0	0.7	0.2	0.0	0.2	0.1	1.0	0.6	0.3
30	0.2		0.2	1.1	0.7	1.0	0.3	0.2	0.5	1.5	0.5	0.4
31	0.4		0.2		0.5		1.0	0.6		1.0		0.7

Greenwich mean day	Month Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Year 1930											
1	0.7	1.1	1.4	0.8	0.5	1.4	0.6	0.5	1.3	1.1	0.7	0.3
2	0.3	1.0	1.4	0.6	0.1	1.4	0.9	0.4	1.0	0.9	0.8	0.2
3	1.3	1.2	0.9	0.5	0.4	1.3	1.0	0.3	1.6	1.5	0.4	1.9
4	1.5	0.6	0.5	0.2	1.1	1.2	1.2	0.2	1.1	1.2	1.2	1.5
5	1.6	0.5	0.0	0.3	1.8	0.5	1.1	0.9	1.1	1.0	0.5	0.3
6	1.6	0.2	0.1	1.3	1.5	0.6	0.5	1.7	1.4	0.9	0.2	0.2
7	1.3	0.4	0.0	1.6	1.5	1.4	0.5	1.7	0.8	0.7	0.3	0.5
8	0.9	0.3	0.0	1.7	1.1	1.0	0.2	1.7	0.6	0.9	0.7	0.0
9	0.4	0.1	0.0	1.3	1.2	0.8	1.2	1.5	1.1	0.6	0.7	0.2
10	0.3	0.1	0.0	1.5	0.8	0.3	1.7	1.2	0.6	0.4	0.3	0.1
11	0.0	0.3	1.1	1.4	0.5	0.2	1.6	1.2	0.6	0.2	0.1	0.1
12	0.1	1.7	1.9	1.3	1.1	1.5	1.5	1.3	0.5	0.2	0.0	0.8
13	0.7	1.9	1.7	1.2	1.1	1.3	1.4	1.1	0.3	0.0	0.5	1.1
14	0.3	1.7	1.6	0.9	0.4	0.7	0.7	1.2	0.3	1.5	1.5	0.7
15	0.7	1.6	1.4	1.0	0.7	0.3	0.8	1.1	0.2	0.3	1.1	0.3
16	0.3	1.5	1.2	1.0	1.6	1.9	1.2	0.7	0.2	0.2	0.4	0.0
17	1.0	1.0	1.1	0.8	1.7	1.2	1.0	0.4	0.6	1.7	0.4	0.0
18	0.6	1.1	1.2	0.6	1.2	1.1	0.5	0.5	2.0	0.9	0.4	0.0
19	0.8	0.9	1.1	1.3	1.1	0.8	0.5	1.0	1.3	0.9	0.0	0.8
20	1.1	0.8	0.8	1.7	1.0	0.7	0.2	0.5	0.4	1.2	0.0	1.5
21	0.9	0.4	0.8	1.4	1.0	0.8	0.3	1.1	1.1	0.7	0.0	1.4
22	0.7	0.3	1.1	1.5	1.1	0.3	0.2	1.2	0.4	0.4	0.0	1.0
23	0.5	0.8	0.7	1.3	0.6	0.1	0.3	1.1	0.7	0.2	0.8	0.9
24	0.4	1.0	1.4	1.1	0.3	0.1	1.0	1.0	0.8	0.1	1.6	0.7
25	0.3	1.3	0.7	0.8	0.8	0.1	1.6	0.6	0.4	1.2	1.8	0.6
26	0.0	0.9	0.9	0.8	0.6	0.5	1.3	0.6	0.1	1.7	1.2	0.5
27	0.0	0.7	1.1	0.5	0.2	1.1	0.7	0.6	0.1	1.6	1.0	0.5
28	0.3	1.3	1.2	0.6	0.3	1.3	0.7	0.3	1.1	1.2	0.5	0.0
29	0.8		1.1	1.1	0.4	1.2	1.0	0.4	1.7	1.3	0.6	0.6
30	1.1		0.6	1.2	1.2	0.9	0.9	0.6	1.8	1.3	0.4	0.1
31	0.7		0.5		1.7		0.6	0.7		1.1		0.0

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Year 1931

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.7	0.7	0.2	0.9	0.1	1.3	0.2	0.4	0.8	1.2	0.6	1.0
2	0.4	0.9	0.8	0.3	0.4	1.7	0.9	0.2	0.1	1.6	0.6	1.5
3	0.0	0.7	0.9	0.9	0.2	0.9	0.5	0.7	1.1	0.9	0.8	1.4
4	0.0	0.7	0.3	0.6	0.2	0.3	0.6	0.4	1.5	1.2	1.2	1.4
5	0.0	0.4	0.4	0.2	0.4	0.2	0.2	0.6	0.8	1.5	1.4	1.3
6	0.0	0.0	0.2	0.1	1.1	0.6	0.2	0.4	1.3	0.8	1.4	0.9
7	0.0	0.4	0.6	0.1	1.7	0.3	0.4	1.0	1.1	0.5	1.0	0.4
8	0.0	0.2	0.8	0.3	0.4	1.0	0.3	1.4	1.1	0.4	1.6	0.3
9	1.1	0.2	0.7	0.7	0.0	1.3	0.1	1.2	0.9	0.3	1.1	0.4
10	1.1	0.1	0.9	1.0	0.0	0.8	0.0	0.8	0.7	0.4	0.9	1.0
11	0.5	0.2	0.2	0.8	1.0	1.0	0.7	0.8	0.5	0.3	0.6	1.3
12	0.3	0.0	1.2	0.0	0.8	1.0	0.6	0.3	0.6	1.5	0.0	1.1
13	0.2	1.8	1.4	0.0	1.2	0.5	0.6	0.5	0.4	1.3	0.8	0.8
14	0.0	1.5	1.0	0.1	1.3	0.5	0.8	0.4	0.9	0.7	1.1	0.8
15	0.6	1.3	0.4	0.2	1.4	0.2	0.8	0.3	1.5	0.9	1.3	0.9
16	1.4	0.7	0.2	0.1	0.8	0.1	0.7	1.0	1.5	0.4	1.4	0.8
17	1.4	0.6	0.2	0.3	0.5	0.0	0.3	0.2	1.3	1.1	1.0	0.8
18	1.3	0.2	0.0	0.9	0.6	0.2	0.2	0.2	0.4	1.2	1.3	0.1
19	0.8	0.2	0.1	1.3	0.2	0.3	0.1	0.9	0.2	1.1	1.1	0.0
20	0.9	0.1	0.8	1.3	0.5	0.2	0.0	1.5	1.0	0.8	0.8	0.0
21	0.3	0.0	1.3	0.3	0.3	0.8	0.1	1.2	1.1	0.9	0.3	0.0
22	0.2	0.3	0.8	0.4	0.1	0.7	0.1	0.3	0.9	1.0	0.0	0.3
23	0.2	0.4	0.6	0.3	0.1	0.4	1.7	0.4	0.9	0.9	0.4	0.9
24	0.1	1.8	0.3	0.2	0.1	0.3	1.0	0.9	0.9	0.6	0.4	0.1
25	1.2	1.4	0.7	0.5	0.7	0.1	1.3	1.4	0.5	0.3	0.4	1.0
26	1.0	1.2	1.1	0.6	1.0	1.5	0.9	0.9	0.6	0.8	1.5	0.1
27	0.8	1.0	0.6	0.1	0.5	1.4	0.5	0.9	0.7	1.1	1.1	0.0
28	0.9	0.3	0.5	0.2	0.0	1.4	1.3	0.9	0.0	1.3	0.3	1.1
29	0.8		0.5	0.0	0.7	0.7	0.8	0.3	0.2	2.0	0.4	1.2
30	0.1		0.1	0.2	0.2	0.2	0.6	0.2	1.1	1.8	0.2	1.2
31	0.5		0.4		0.1		0.2	0.4		1.1		1.0

Year 1932

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.0	0.2	0.0	1.2	0.5	0.2	0.1	0.9	0.8	0.4	1.2	0.6
2	1.4	0.2	1.4	1.5	1.0	0.2	0.1	1.2	0.8	0.8	0.8	0.5
3	0.9	1.7	1.4	1.2	1.1	0.0	0.0	1.4	0.1	0.6	0.5	0.4
4	0.2	1.7	1.3	1.0	1.2	0.0	0.8	1.1	0.3	0.7	0.8	0.4
5	0.2	1.0	1.3	1.2	1.1	0.1	1.1	1.1	0.8	0.6	0.6	0.0
6	0.4	1.0	1.2	0.9	0.9	0.3	1.5	0.5	1.5	0.2	0.1	0.4
7	0.9	0.9	1.1	1.5	0.4	0.9	1.1	0.1	0.9	0.3	0.5	0.0
8	1.1	1.1	1.1	1.1	0.1	1.1	1.0	0.1	1.2	0.4	0.3	1.3
9	1.1	0.9	1.3	0.9	0.0	1.1	0.9	0.3	1.0	0.9	0.0	1.0
10	1.1	1.4	1.6	0.6	0.7	1.0	0.8	0.0	0.1	1.0	0.1	0.8
11	1.2	1.3	1.2	0.2	1.1	0.9	0.2	0.4	0.1	0.6	0.3	0.3
12	1.2	1.1	0.5	0.2	0.5	0.6	0.4	1.1	0.2	0.4	0.8	0.1
13	0.7	0.8	0.3	1.4	0.8	0.6	0.0	1.1	0.2	0.2	0.7	1.1
14	0.8	0.7	0.6	1.1	0.8	0.2	0.1	0.5	0.4	0.3	1.2	1.8
15	0.8	0.4	0.1	0.9	1.0	0.0	0.1	0.2	0.2	1.8	1.1	1.6
16	0.8	0.0	0.2	0.6	1.1	0.1	1.4	0.0	0.0	1.3	1.6	1.5
17	0.5	0.0	0.5	0.8	0.4	0.0	0.8	0.1	0.1	1.2	1.2	1.3
18	0.1	0.2	1.4	1.2	0.1	0.1	0.4	0.1	0.9	0.6	0.9	0.8
19	0.0	0.8	0.6	0.2	0.1	0.5	0.5	0.1	1.2	0.5	0.6	0.8
20	0.1	1.2	0.8	0.0	0.0	1.1	0.2	0.1	1.0	1.5	0.6	0.2
21	0.0	0.5	1.2	0.0	1.0	0.7	0.5	1.0	0.6	1.5	0.2	0.0
22	0.0	1.2	1.3	1.0	0.7	0.8	0.4	1.0	1.1	1.0	0.0	0.2
23	0.2	1.4	1.0	1.4	1.0	0.4	0.1	0.8	1.6	1.2	0.2	0.1
24	0.9	1.0	0.7	1.4	0.8	0.2	0.4	0.1	1.6	1.0	0.0	0.2
25	1.4	0.8	0.2	1.2	1.1	0.5	0.1	0.4	1.8	0.7	1.0	0.9
26	1.2	0.4	0.0	1.2	0.7	0.6	0.5	0.1	1.1	0.1	0.2	0.8
27	1.4	0.0	0.4	1.0	0.8	0.1	0.2	1.7	1.0	1.1	0.1	0.9
28	1.4	0.0	1.6	0.8	1.1	0.1	0.0	1.9	0.3	0.1	0.7	0.9
29	0.8	0.0	1.7	0.6	1.9	0.2	0.0	1.7	0.8	0.3	1.0	0.2
30	0.7		1.7	0.2	1.9	0.2	0.3	1.3	0.6	0.9	0.4	0.8
31	0.9		1.6		0.8		0.9	0.7		0.3		0.9

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1933							
1	1.2	0.1	0.4	0.5	1.9	1.1	0.5	0.0	0.6	0.1	0.4	0.1
2	0.8	0.8	0.4	0.4	1.1	0.5	0.4	0.1	0.8	0.3	0.6	0.4
3	0.2	0.3	0.5	0.9	0.8	0.4	0.5	0.1	0.1	0.2	0.9	1.2
4	0.0	0.3	0.2	0.8	1.0	0.1	0.4	0.1	0.4	0.7	1.1	1.3
5	0.0	0.3	0.0	0.5	0.8	0.0	0.3	1.8	0.0	1.3	0.7	1.4
6	1.2	0.1	0.1	0.6	1.0	0.0	0.4	1.3	0.2	0.9	1.6	0.8
7	0.8	0.5	0.1	1.0	0.7	0.1	0.2	0.4	0.4	1.6	1.5	1.0
8	0.3	0.4	0.2	0.8	0.1	1.0	0.9	0.3	0.8	1.0	1.5	0.2
9	0.1	0.3	0.0	0.7	0.0	0.8	1.3	0.1	1.9	1.2	1.0	1.5
10	0.0	0.2	0.4	0.7	0.1	0.3	0.9	0.1	1.2	1.1	0.8	1.3
11	0.1	0.0	0.8	0.1	0.1	0.1	0.9	0.0	0.7	0.9	1.1	0.6
12	0.1	0.3	0.4	0.0	0.1	0.4	0.4	0.2	0.8	1.1	0.4	0.2
13	0.1	0.0	0.8	0.1	0.4	1.6	0.1	1.5	1.7	1.3	0.2	0.3
14	0.7	0.8	0.6	0.5	1.0	1.2	0.1	1.0	1.4	1.3	0.1	0.1
15	1.2	0.9	0.2	1.2	0.9	0.8	0.0	0.8	1.5	0.6	0.1	0.1
16	0.5	0.1	0.1	1.3	0.6	0.1	0.3	0.4	1.0	0.1	0.2	0.2
17	0.2	0.0	0.4	1.4	0.8	0.2	1.0	1.0	0.9	0.6	0.0	0.4
18	0.1	0.3	1.5	1.1	1.1	0.1	1.0	1.3	0.9	1.2	0.5	0.9
19	1.2	1.7	1.5	1.2	0.7	0.8	0.3	1.0	0.9	0.2	0.6	0.6
20	0.9	1.4	1.6	1.2	0.2	1.2	0.5	1.1	0.6	0.4	0.6	0.3
21	0.1	1.7	1.5	1.2	0.2	0.6	0.1	1.3	0.6	0.1	1.0	0.4
22	1.4	1.6	1.5	1.2	0.3	0.3	0.3	0.2	0.5	0.2	0.4	0.3
23	1.1	1.5	1.5	1.1	0.2	0.1	1.5	1.0	0.3	0.4	0.5	0.2
24	1.1	1.5	1.5	0.6	0.1	0.1	1.6	1.1	0.4	0.8	0.1	0.0
25	0.9	1.1	1.0	0.5	0.3	1.0	0.5	0.9	0.9	0.9	0.3	0.3
26	1.0	1.2	0.6	0.8	0.0	0.6	0.7	0.9	0.6	0.9	0.0	0.4
27	1.4	0.6	1.1	0.4	0.7	0.9	1.1	0.3	0.8	0.3	1.1	0.4
28	1.2	0.3	0.9	0.3	0.6	1.0	0.2	0.1	0.9	0.1	0.6	0.8
29	0.9		0.8	0.1	1.1	0.8	0.2	0.1	0.7	0.0	0.4	0.5
30	0.7		0.6	1.3	1.2	0.4	0.1	0.2	0.4	0.2	0.2	0.0
31	0.5		0.6		1.2		0.3	0.1		0.2		0.2

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1934							
1	1.6	0.1	0.4	1.4	0.2	0.1	0.6	1.0	0.9	0.5	0.0	1.1
2	1.2	0.7	1.2	0.9	1.3	0.0	0.2	0.7	1.3	0.4	0.1	0.8
3	0.3	0.4	0.7	0.6	1.3	0.1	1.5	1.3	1.1	0.2	0.5	1.2
4	0.1	1.1	1.5	1.3	0.7	0.6	0.8	1.1	0.8	0.5	0.2	1.8
5	0.0	0.7	1.7	1.4	0.5	1.4	0.7	0.7	0.1	0.6	0.7	1.0
6	0.1	0.2	1.2	1.1	0.3	1.3	0.4	0.6	0.4	0.6	0.1	0.2
7	0.2	0.3	1.4	0.6	0.2	0.4	0.2	0.5	0.5	0.7	1.7	0.8
8	0.3	0.7	0.5	0.3	0.1	0.8	0.2	0.4	0.7	0.0	1.4	0.5
9	0.2	1.7	0.7	0.2	0.3	0.6	0.5	0.1	0.0	0.0	0.6	0.1
10	0.3	1.3	1.0	0.1	0.6	0.1	0.0	0.3	0.1	0.0	0.3	0.1
11	0.3	0.7	1.0	0.1	1.4	0.9	0.5	0.6	0.6	0.0	0.3	0.8
12	0.1	0.6	0.2	0.2	1.3	1.2	0.2	1.0	0.6	0.7	0.2	0.3
13	0.1	0.5	0.2	0.1	0.6	0.2	0.3	0.9	0.0	0.8	0.6	0.3
14	1.0	0.1	0.1	0.2	0.1	0.7	0.6	0.7	0.1	0.3	0.4	0.6
15	0.8	1.0	0.8	0.5	0.1	0.8	0.7	0.4	0.1	1.3	0.1	0.8
16	0.6	1.7	0.8	1.0	0.0	0.5	0.7	0.3	0.9	0.3	0.1	0.0
17	0.3	1.3	0.5	0.1	0.1	0.3	0.2	0.8	1.1	0.6	0.3	0.0
18	1.0	1.1	0.8	0.0	1.7	0.9	0.0	0.7	0.2	0.4	0.5	0.6
19	0.4	0.4	0.3	0.5	0.9	0.2	0.0	0.8	0.9	0.0	0.4	0.5
20	0.3	0.5	0.1	0.6	0.4	0.3	0.1	0.1	0.8	0.9	0.0	0.4
21	0.5	0.3	0.3	0.3	0.7	0.0	0.1	0.5	0.5	0.6	0.0	1.1
22	0.9	0.5	1.1	0.6	0.8	0.0	0.0	0.9	0.9	0.3	0.0	0.5
23	0.9	0.1	1.0	0.1	0.4	0.2	0.0	0.5	0.1	0.2	0.0	0.0
24	0.7	0.8	0.8	0.4	0.5	0.1	0.4	0.0	1.5	1.7	1.2	1.1
25	0.4	0.7	1.3	0.3	0.7	0.1	0.3	0.2	1.8	1.6	0.8	1.0
26	0.6	0.2	0.6	0.2	0.2	0.0	0.1	1.1	0.9	1.2	0.2	0.7
27	0.2	0.3	0.5	0.1	0.1	0.8	0.1	1.2	1.3	0.6	0.1	0.1
28	0.7	0.5	0.8	0.2	0.0	0.4	0.1	1.3	0.8	0.6	0.7	0.2
29	0.9		0.9	0.0	0.1	0.2	0.8	1.3	0.6	0.0	0.5	1.8
30	0.7		0.6	0.2	0.2	0.1	1.8	1.0	1.1	0.1	0.0	1.5
31	0.7		1.5		0.1		1.1	0.7		0.1		0.9

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1935							
1	1.0	1.3	1.1	0.1	1.7	0.1	0.3	0.6	0.9	0.9	0.6	1.3
2	0.7	1.6	1.0	0.0	1.3	0.0	0.5	0.4	0.1	0.7	1.1	1.1
3	0.7	1.1	1.0	0.2	0.5	0.2	0.1	0.0	0.4	0.2	0.9	1.0
4	0.9	0.1	0.2	0.4	0.1	0.9	0.1	0.1	1.0	0.3	0.1	0.1
5	0.3	0.3	0.8	0.2	0.1	0.8	0.0	0.6	0.7	0.0	1.4	0.2
6	0.0	0.2	0.3	0.0	0.0	0.5	0.0	0.9	0.5	0.1	0.9	0.1
7	0.1	0.7	0.4	0.0	0.2	1.8	0.8	0.5	0.8	0.9	0.3	0.7
8	0.3	0.6	0.3	0.8	0.0	1.7	1.5	0.2	0.3	0.6	0.4	0.5
9	0.2	0.3	0.4	1.3	0.0	1.6	1.0	0.3	0.7	0.3	0.4	0.6
10	0.2	0.6	0.3	1.8	1.2	1.4	0.3	0.3	1.1	1.0	0.0	0.7
11	0.7	0.1	0.8	1.9	0.9	1.3	0.7	0.1	1.9	1.3	0.9	0.7
12	0.6	0.3	0.3	1.6	1.0	0.7	0.3	0.0	1.6	0.6	1.6	0.7
13	0.3	1.7	1.6	1.3	0.7	0.6	0.2	0.4	0.1	0.2	1.3	0.9
14	0.4	1.5	1.9	0.6	0.2	0.4	0.9	0.0	0.5	1.0	1.3	1.3
15	0.9	0.9	1.4	0.5	0.5	0.0	0.6	0.3	1.0	1.2	0.2	1.3
16	0.6	1.0	1.3	1.0	1.0	0.1	0.4	0.6	0.9	1.0	0.3	1.2
17	1.6	0.5	1.0	0.6	0.1	0.8	0.0	0.1	1.1	1.0	0.1	0.7
18	1.0	0.8	0.7	0.9	0.6	1.5	0.1	0.0	1.3	0.9	0.7	0.6
19	0.5	0.2	0.7	0.5	0.5	1.2	0.9	1.0	1.0	0.6	0.9	0.4
20	0.4	0.7	0.8	0.4	1.4	0.8	0.4	1.0	0.5	1.8	1.0	0.4
21	0.7	1.2	1.2	0.1	0.7	0.7	0.5	1.0	0.1	1.6	0.4	0.4
22	0.8	0.5	0.6	0.1	0.5	0.2	1.1	0.9	0.1	1.1	0.3	0.1
23	1.3	0.7	0.5	0.7	0.1	0.2	0.9	0.9	1.6	0.4	0.2	0.0
24	1.2	1.1	1.0	0.5	0.0	0.1	1.4	0.6	1.2	1.8	0.3	0.6
25	0.7	0.8	0.6	0.3	0.1	0.1	1.7	0.8	1.7	1.0	0.1	1.1
26	0.7	1.3	0.3	0.2	0.4	0.1	0.6	0.5	1.2	0.5	0.0	1.3
27	1.6	0.0	0.1	0.0	0.4	0.4	0.5	1.2	0.9	1.6	1.2	1.3
28	1.4	0.0	0.0	0.0	0.2	0.8	0.2	0.9	0.7	1.2	0.4	1.4
29	0.3		0.1	0.1	0.3	0.8	0.5	0.3	0.6	0.7	1.0	0.9
30	0.6		1.3	0.4	0.7	0.6	0.0	0.5	1.3	1.0	1.2	0.7
31	0.9		0.5		0.4		0.6	0.7		1.3		0.6

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1936							
1	0.2	0.2	0.2	1.1	0.6	1.2	0.2	0.7	0.1	0.5	0.3	0.8
2	0.1	1.0	0.2	0.9	0.2	1.5	1.8	0.6	0.4	0.1	0.8	0.5
3	0.1	0.6	0.1	1.3	0.1	0.8	0.8	0.5	0.1	0.1	1.6	0.7
4	0.1	0.7	0.1	0.5	1.1	0.4	0.2	0.2	0.6	0.2	0.9	1.0
5	0.2	0.1	0.5	0.0	0.3	0.2	1.2	0.8	0.4	0.9	0.8	0.7
6	0.1	0.2	0.7	0.2	0.2	0.0	1.5	0.9	0.1	1.1	0.7	0.7
7	0.1	0.2	0.1	0.5	0.2	0.2	1.0	0.0	0.0	1.1	0.9	0.7
8	1.2	0.3	1.0	0.9	0.1	1.0	0.8	0.9	0.7	1.0	0.8	0.3
9	1.0	1.1	0.8	0.3	0.0	1.8	0.3	0.7	0.8	1.2	1.0	0.1
10	1.2	1.2	0.3	0.1	1.2	1.2	1.5	0.9	0.6	1.4	0.9	0.1
11	0.8	0.7	0.0	0.4	1.3	0.8	1.5	0.1	1.2	0.5	1.6	0.1
12	1.1	0.2	0.1	0.9	1.5	0.4	0.9	0.5	0.5	0.1	0.7	0.8
13	1.2	0.0	0.3	1.1	0.6	0.6	0.9	0.3	0.1	0.3	0.0	0.8
14	0.6	1.1	0.2	0.9	0.9	1.0	0.1	0.4	0.2	0.7	0.3	0.7
15	0.2	0.9	0.7	1.2	0.8	1.0	0.1	0.4	0.3	1.0	1.2	0.1
16	0.0	1.5	0.2	0.6	1.3	0.9	0.9	0.2	0.1	1.7	1.0	0.2
17	0.2	1.5	0.7	1.1	0.9	0.4	1.1	0.2	0.2	1.7	0.9	0.1
18	1.3	0.6	0.8	1.6	1.5	0.9	0.9	0.0	0.6	0.9	1.0	0.2
19	0.8	1.6	0.8	1.5	1.3	1.9	0.4	0.1	0.2	0.6	0.9	0.1
20	0.6	0.7	1.2	1.5	1.0	1.1	0.5	0.4	0.1	0.8	0.5	0.4
21	0.9	1.3	1.4	1.7	0.8	0.2	0.1	0.3	0.4	0.2	0.3	0.8
22	0.8	1.3	1.1	1.7	0.3	0.3	0.2	0.2	0.8	0.0	0.0	0.1
23	0.6	1.1	1.4	1.4	0.1	0.0	0.0	0.1	0.9	0.8	0.0	0.2
24	1.7	0.6	1.5	0.8	0.0	0.6	0.1	0.2	0.2	1.6	0.0	0.1
25	1.4	0.8	1.3	0.6	0.2	0.2	0.5	0.6	0.1	0.6	0.1	0.1
26	1.4	1.2	1.0	0.1	0.7	0.8	0.2	0.4	1.4	0.2	0.6	0.1
27	0.8	1.1	1.1	0.3	0.4	0.4	0.6	0.8	0.8	0.0	0.1	1.2
28	0.9	0.1	0.6	0.6	0.6	0.3	0.8	0.4	0.6	0.1	0.7	1.8
29	0.7	0.6	0.5	0.1	1.3	0.1	1.7	0.5	1.0	0.2	2.0	0.7
30	0.7		0.2	0.4	1.1	0.1	0.7	1.2	0.2	0.1	0.4	0.3
31	0.6		0.5		1.0		0.8	0.7		1.7		0.2

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1937							
1	0.1	0.6	1.5	0.5	1.0	0.6	0.7	0.7	0.9	1.4	0.3	1.1
2	0.7	0.7	1.3	1.4	0.4	0.6	0.6	1.8	0.2	0.5	0.7	0.7
3	0.6	1.9	0.1	1.2	0.6	0.3	0.3	1.2	0.1	1.4	0.2	0.3
4	0.4	1.2	0.4	0.7	1.3	0.7	0.3	1.5	0.5	1.9	0.1	0.1
5	0.2	1.2	1.8	0.3	1.9	1.3	0.9	0.5	0.6	0.6	0.1	0.3
6	0.1	1.1	0.6	0.4	0.1	1.6	1.2	0.7	0.5	0.8	0.1	0.6
7	1.6	0.6	0.1	0.4	0.1	0.8	1.1	0.5	0.4	1.2	0.9	1.0
8	0.6	0.4	0.0	0.1	0.3	0.6	0.2	0.2	0.4	1.6	1.1	0.8
9	1.2	1.6	0.4	0.1	1.1	0.3	1.1	0.2	0.4	1.9	1.0	0.5
10	1.4	1.2	0.4	0.1	0.9	0.9	0.9	0.2	1.3	1.6	0.3	0.8
11	1.0	1.0	0.1	0.7	0.9	0.4	1.0	0.3	1.5	1.7	1.0	0.7
12	0.9	1.1	0.1	1.5	0.3	0.1	0.7	0.2	0.2	1.5	0.8	0.2
13	0.6	1.1	1.0	0.8	0.4	1.3	0.4	0.1	0.9	0.9	0.4	0.1
14	0.2	1.0	1.3	0.1	0.9	0.7	1.5	0.4	0.9	0.7	0.1	0.1
15	0.1	0.9	1.6	0.4	0.6	0.6	0.8	0.7	0.6	1.2	0.0	0.2
16	0.1	0.8	0.7	0.1	0.8	0.8	0.5	0.1	0.8	0.5	0.0	0.1
17	0.2	0.7	0.8	0.4	0.3	1.0	0.4	0.2	0.6	0.1	0.5	0.1
18	0.2	1.0	0.5	0.8	0.3	0.6	0.5	0.2	0.9	0.2	1.5	1.6
19	0.2	1.6	0.3	0.9	0.6	0.2	1.5	0.4	0.5	0.3	1.5	1.5
20	0.7	1.0	0.2	0.5	0.1	1.3	1.3	0.2	0.2	0.0	1.2	1.2
21	1.1	1.1	0.5	0.8	0.7	0.8	0.8	0.4	0.6	0.5	0.8	0.5
22	0.3	0.8	1.5	0.4	0.7	1.2	1.5	1.9	0.5	1.0	1.4	0.7
23	0.1	0.2	0.9	0.5	0.3	0.4	1.2	0.3	0.7	1.6	1.4	1.7
24	0.2	0.4	0.7	1.8	0.5	0.9	1.5	0.0	0.8	1.6	1.2	1.3
25	0.0	0.6	0.4	2.0	1.2	0.7	1.2	0.1	0.2	1.1	0.4	0.7
26	0.2	0.3	0.9	2.0	1.0	0.2	0.7	0.4	0.6	1.4	0.3	0.9
27	1.3	0.5	1.7	1.8	1.3	1.6	0.2	1.1	0.5	1.2	0.6	0.1
28	1.0	0.6	1.2	2.0	1.7	0.9	0.2	0.9	0.3	1.0	1.1	0.1
29	0.7		0.6	1.2	1.4	0.4	0.1	0.5	0.1	0.4	1.6	0.2
30	1.1		0.7	1.2	0.7	0.3	0.6	0.1	1.7	0.2	1.5	0.2
31	0.2		1.9		0.6		0.4	0.1		0.3		1.0

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1938							
1	0.7	0.9	1.3	0.4	0.3	0.3	1.2	1.4	0.2	1.7	0.5	0.0
2	0.7	0.7	0.4	0.2	0.4	1.0	0.9	1.3	0.3	1.0	0.4	1.5
3	0.7	1.0	0.4	0.5	1.0	0.6	0.2	1.6	0.7	0.9	0.2	1.4
4	1.5	0.8	0.6	0.5	1.6	0.2	1.7	1.8	0.7	0.7	0.3	0.8
5	0.7	0.5	1.6	0.1	1.0	0.6	1.3	1.3	1.0	0.0	0.3	0.6
6	0.9	1.7	1.0	1.1	0.9	0.5	1.0	0.8	0.1	0.6	0.3	0.3
7	1.3	1.2	0.6	1.1	0.3	1.0	0.3	0.8	0.6	1.9	0.5	0.2
8	1.1	1.7	0.3	0.5	0.3	1.5	0.4	0.3	0.5	1.8	1.4	0.0
9	0.7	1.3	0.2	1.0	0.3	0.8	1.1	0.2	0.8	1.0	1.5	0.9
10	0.1	1.4	0.1	0.6	0.5	0.9	1.4	0.9	0.6	0.8	0.8	1.7
11	0.2	1.2	0.4	1.1	2.0	1.6	0.7	1.7	0.8	0.6	0.2	0.7
12	1.4	0.5	1.1	1.0	1.8	1.4	0.4	0.9	0.7	0.3	0.1	0.6
13	1.3	0.9	0.2	1.7	1.0	1.3	1.0	0.7	1.5	0.3	0.1	0.7
14	0.5	1.7	0.7	1.8	1.5	0.6	1.3	0.3	1.8	0.0	1.1	0.6
15	0.8	0.1	0.7	1.2	1.3	0.1	1.9	0.0	1.9	0.2	0.6	0.2
16	1.7	0.2	0.1	2.0	0.8	0.6	1.5	0.0	1.0	0.9	0.8	1.5
17	2.0	0.2	0.3	1.2	0.8	0.4	0.4	0.3	0.7	0.5	1.5	1.3
18	1.4	0.4	0.1	1.1	0.3	0.2	0.3	0.1	0.3	0.4	0.9	1.6
19	1.3	0.1	0.0	0.6	0.3	0.4	0.4	0.2	0.2	0.6	0.5	1.2
20	1.3	0.1	0.0	0.3	0.1	0.2	0.4	0.0	0.5	0.8	0.6	1.0
21	1.5	0.2	1.1	0.5	0.4	0.8	0.4	0.6	0.6	0.3	1.4	0.6
22	2.0	0.1	1.6	1.0	0.4	0.3	0.3	1.4	0.6	0.4	0.9	1.2
23	1.0	1.1	1.7	1.6	0.1	0.0	0.4	1.5	0.8	1.3	0.8	0.5
24	0.9	0.5	1.5	0.7	1.1	0.2	0.3	0.9	0.2	1.4	1.1	0.1
25	2.0	1.2	1.0	1.0	0.9	0.2	0.0	0.5	0.2	1.5	0.9	0.2
26	1.8	0.8	1.3	0.5	0.3	0.3	0.2	0.2	1.6	1.5	1.2	0.0
27	0.8	0.7	0.5	0.2	0.5	0.2	0.2	0.1	1.6	1.3	0.5	0.1
28	0.6	1.1	0.2	0.1	1.0	0.1	0.1	0.7	1.8	1.2	0.2	0.4
29	0.9		0.9	0.1	1.4	0.7	0.8	0.8	1.1	0.6	0.5	0.2
30	0.4		0.2	0.2	0.8	0.5	1.8	0.8	1.6	0.5	0.2	0.3
31	1.6		0.2		0.3		0.6	0.3		0.0		0.1

Table 1-U--International daily magnetic character-figures C, 1905-1942--Continued

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1939							
1	0.1	1.3	1.4	1.2	1.8	0.9	0.7	0.2	0.2	0.6	0.5	0.6
2	0.3	1.2	1.3	1.0	1.5	1.2	0.6	0.0	0.9	0.3	0.2	0.4
3	0.1	0.9	1.3	0.9	1.0	1.0	1.7	0.1	1.5	1.7	0.5	0.5
4	0.2	0.5	1.3	1.1	0.5	1.1	1.7	0.3	0.4	1.6	0.2	0.3
5	1.0	1.1	0.8	0.8	1.4	0.7	2.0	0.1	0.3	1.2	0.3	1.0
6	0.7	1.8	0.8	0.3	1.6	0.3	0.8	0.1	0.5	1.4	0.5	1.4
7	0.6	1.3	0.4	0.2	1.5	0.2	0.0	0.1	0.4	1.0	0.4	1.7
8	0.7	0.7	0.9	0.8	1.5	0.2	0.3	0.3	0.4	0.6	0.1	1.4
9	1.0	0.9	1.1	1.1	1.2	0.1	0.2	0.1	1.4	1.4	0.2	1.1
10	0.8	1.1	0.6	1.4	0.4	0.5	0.1	0.9	1.1	0.3	0.1	0.8
11	0.8	0.8	1.0	1.4	0.3	0.2	1.0	1.2	0.3	0.7	0.5	0.4
12	0.3	0.0	0.9	1.0	0.2	0.3	0.9	2.0	0.7	0.1	0.9	0.8
13	0.2	0.3	0.4	0.5	0.5	1.0	0.2	1.4	0.4	2.0	1.6	0.3
14	0.4	0.5	0.5	0.5	0.1	1.8	1.4	0.5	0.7	1.9	1.1	0.1
15	0.4	1.0	1.1	0.2	0.6	0.8	0.7	0.3	0.3	1.8	0.7	0.4
16	0.8	1.1	1.1	0.4	1.1	1.3	1.2	1.8	0.4	1.5	0.2	0.8
17	1.0	1.1	0.8	2.0	0.7	0.3	1.1	1.1	1.7	1.3	0.3	0.3
18	0.5	0.9	0.2	1.5	0.4	1.2	0.6	0.5	0.5	1.3	0.1	0.0
19	0.4	0.9	0.4	1.6	0.8	1.2	0.9	1.0	1.4	1.0	0.8	0.0
20	0.6	0.5	0.5	1.2	0.8	0.9	1.6	0.4	1.4	0.1	0.3	0.2
21	1.1	0.1	1.3	1.1	1.2	1.1	1.7	0.8	0.6	0.8	0.2	1.3
22	1.0	0.1	1.5	1.2	1.3	0.7	1.1	2.0	0.8	0.5	0.0	1.3
23	0.8	0.6	1.2	1.9	1.3	0.7	0.7	1.8	0.3	1.1	0.1	0.8
24	0.5	2.0	0.8	1.9	1.3	0.5	0.7	0.9	0.2	0.4	0.8	0.6
25	0.2	1.9	0.4	1.7	1.2	0.3	0.8	0.5	0.9	0.2	1.2	0.4
26	0.0	0.5	0.9	0.6	0.9	1.1	1.5	0.4	1.2	0.4	1.0	0.3
27	0.0	0.3	1.4	0.9	0.8	1.2	0.7	0.4	0.4	0.1	0.4	1.1
28	0.4	0.8	1.8	0.9	1.2	1.1	0.5	0.3	0.1	0.6	0.4	0.7
29	0.3		1.9	0.8	1.4	1.3	0.3	0.3	0.1	0.5	0.5	0.6
30	0.1		1.4	0.5	0.3	0.9	0.2	0.6	0.8	0.5	0.4	0.4
31	0.2		1.0		0.2		0.2	0.2		0.3		0.1

Greenwich mean day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1940							
1	0.5	1.6	0.3	1.7	0.4	0.1	0.5	0.7	1.2	1.6	0.7	0.7
2	0.8	1.0	0.1	1.4	0.3	0.5	0.2	0.8	0.8	0.9	0.3	1.2
3	1.8	1.1	0.4	1.9	0.2	0.5	0.9	1.4	1.1	1.0	0.6	1.0
4	1.3	0.6	0.2	1.1	0.1	0.2	1.2	0.5	0.9	0.5	1.2	0.7
5	0.8	0.6	0.1	0.7	0.2	0.7	0.9	0.7	0.6	0.5	1.1	0.4
6	1.2	1.1	0.0	0.4	0.0	1.3	0.7	1.0	0.5	0.9	0.4	0.2
7	1.2	0.9	0.1	0.0	0.3	1.2	0.3	0.8	1.2	1.7	0.5	0.0
8	0.6	0.7	0.8	0.1	0.2	1.0	0.3	0.7	0.9	1.3	0.1	0.0
9	1.0	0.5	1.1	0.1	0.6	0.9	0.9	1.6	0.8	0.4	0.8	0.6
10	1.5	0.5	0.2	0.0	1.1	0.3	1.2	0.6	0.1	0.4	0.1	0.8
11	1.4	0.8	0.1	0.3	1.0	0.2	0.6	0.9	0.2	0.5	0.1	0.6
12	1.2	1.1	1.0	0.1	1.1	0.3	0.2	0.6	0.1	0.5	1.0	0.7
13	0.3	0.7	0.6	0.4	0.6	0.3	1.7	0.4	0.2	0.1	1.4	0.6
14	0.2	0.3	0.5	0.6	0.8	1.5	1.2	0.4	1.1	0.0	1.0	1.0
15	0.3	0.4	0.0	1.0	0.9	1.3	0.7	0.1	0.7	0.8	0.7	0.8
16	0.8	0.5	0.4	0.8	0.4	0.9	0.4	0.1	0.8	0.8	1.1	0.6
17	1.2	0.2	0.1	0.3	0.7	0.8	0.2	0.1	0.1	0.4	1.0	0.6
18	1.7	0.0	0.0	0.1	1.5	1.0	0.1	1.0	0.1	0.8	0.3	0.4
19	0.5	0.1	1.2	0.3	0.7	0.7	0.3	0.8	0.1	1.0	0.3	0.3
20	0.5	1.0	1.3	0.8	0.7	0.1	0.2	0.7	0.8	0.6	0.7	1.7
21	0.1	1.0	0.7	0.9	0.6	0.1	0.6	0.4	0.9	1.1	1.1	1.5
22	0.7	0.6	0.6	1.0	1.3	0.8	0.9	0.7	0.5	0.9	1.2	1.2
23	0.5	0.6	1.5	0.5	1.2	0.4	0.4	0.3	0.0	0.0	1.1	1.2
24	0.9	0.9	2.0	0.4	1.8	1.0	0.7	0.0	0.1	0.0	0.4	0.5
25	0.9	1.6	2.0	1.8	0.8	2.0	0.5	0.3	1.1	1.1	1.7	0.8
26	0.2	0.7	1.6	1.4	1.3	1.3	0.3	1.1	1.7	1.4	1.2	0.8
27	0.2	0.3	1.3	0.8	1.0	0.5	0.2	0.9	1.5	1.1	0.8	0.7
28	0.0	0.3	1.1	0.6	0.9	0.5	0.3	0.8	1.4	0.7	0.4	0.9
29	0.9	0.8	1.9	0.5	0.4	0.5	0.5	0.5	0.8	0.3	1.5	1.1
30	1.2		2.0	0.8	0.1	0.8	1.1	0.2	0.7	0.2	0.9	1.4
31	1.5		1.9		0.0		1.0	0.5		0.4		1.3

Table 1-U--International daily magnetic character-figures C, 1905-1942--Concluded

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1941							
1	1.1	0.3	2.0	0.4	0.7	0.4	0.5	0.5	1.0	0.3	1.7	1.7
2	0.4	0.4	1.4	0.7	0.3	0.1	0.4	1.4	0.6	0.5	0.4	1.1
3	0.3	1.1	1.2	0.8	0.3	0.2	0.8	0.9	0.3	0.3	0.5	0.8
4	0.4	0.6	1.4	0.3	0.9	0.1	1.3	1.8	0.1	0.2	0.2	1.0
5	0.2	1.0	1.3	0.4	0.3	0.1	2.0	1.3	0.0	0.4	0.9	0.9
6	1.0	1.1	1.0	0.6	0.5	0.6	1.5	1.2	0.0	0.2	1.4	0.6
7	0.9	1.2	1.0	1.1	0.3	0.3	1.5	1.1	1.2	0.1	0.9	0.4
8	0.4	1.0	0.8	0.8	0.6	0.4	0.9	0.2	0.7	0.7	0.9	0.6
9	0.8	0.7	0.8	0.9	0.6	0.9	1.0	0.1	0.7	0.3	0.8	0.6
10	0.6	0.4	0.3	1.2	0.6	1.4	1.2	0.1	0.4	0.7	1.1	0.3
11	0.6	0.3	0.7	1.1	0.3	1.3	0.5	0.4	0.5	1.6	1.1	0.1
12	0.4	0.3	0.6	0.8	0.4	0.7	0.5	0.4	0.2	0.9	0.7	0.2
13	0.3	1.4	0.9	0.4	0.6	1.5	0.2	0.5	1.3	0.5	0.3	0.9
14	0.1	1.1	1.8	0.1	0.4	1.2	0.2	0.3	1.2	0.9	0.3	1.1
15	0.2	1.1	1.0	0.5	0.4	1.2	0.2	0.2	1.3	0.8	0.2	0.8
16	0.8	0.7	0.3	0.7	0.9	0.2	0.9	0.1	1.0	0.9	0.4	0.9
17	1.6	1.1	0.1	0.3	1.2	1.1	0.6	0.1	0.6	0.2	1.4	0.8
18	1.4	0.3	0.5	1.0	0.6	1.1	0.3	0.3	2.0	0.3	1.2	0.9
19	1.2	0.4	1.2	1.4	0.3	0.6	0.3	1.1	2.0	0.7	1.0	0.2
20	0.8	0.8	1.3	0.7	0.2	1.1	0.5	0.2	1.4	0.3	0.5	0.2
21	0.4	1.4	1.4	0.4	1.3	0.8	1.4	0.5	1.3	0.2	0.6	0.3
22	0.6	1.5	1.3	0.2	1.2	0.7	1.1	0.2	0.2	1.6	0.9	0.3
23	1.3	1.4	1.0	0.1	1.2	0.3	0.9	0.1	1.0	0.9	0.9	0.8
24	1.4	1.1	0.6	1.7	1.2	0.5	0.7	0.4	1.2	0.9	0.3	0.5
25	1.3	1.0	0.3	1.3	1.0	0.4	0.8	0.8	1.1	0.5	0.4	0.1
26	1.1	0.6	0.1	0.9	0.6	0.7	0.1	1.3	0.2	0.8	0.1	0.5
27	1.1	0.2	0.1	0.2	0.4	0.8	0.0	1.6	0.5	0.4	0.8	0.9
28	0.7	0.5	1.7	1.1	0.6	0.4	0.2	1.3	0.5	0.3	1.6	0.4
29	0.3		1.5	0.9	0.6	0.6	0.1	1.3	0.9	0.4	0.6	0.7
30	0.7		1.9	0.2	0.6	0.3	0.2	1.2	0.8	0.4	0.4	0.4
31	0.1		1.6		0.7		0.4	0.6		1.6		0.3

Greenwich mean day	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Year 1942							
1	0.1	0.4	2.0	0.8	0.7	0.2	0.8	0.2	0.7	0.2	0.7	0.5
2	1.1	0.9	1.6	1.2	0.7	0.0	0.2	0.3	0.9	1.7	0.9	0.2
3	1.1	0.3	1.4	1.3	0.4	0.7	0.1	0.3	0.3	1.5	0.6	0.4
4	1.3	0.2	1.0	1.7	1.3	0.3	0.0	0.2	0.5	1.3	0.6	0.6
5	1.1	1.3	1.7	0.5	1.0	0.5	0.3	0.3	0.5	1.0	0.4	0.2
6	0.8	1.4	1.2	0.2	0.4	0.2	0.4	0.8	1.2	0.3	0.3	0.3
7	0.5	0.7	1.1	0.1	0.1	0.1	0.5	1.1	0.6	0.6	0.4	0.8
8	0.2	0.1	1.4	1.2	0.2	0.2	1.2	0.0	0.2	0.4	0.8	0.8
9	0.3	0.2	1.4	0.5	0.1	0.0	0.8	0.3	0.2	0.3	0.3	1.4
10	0.6	0.8	0.8	0.5	0.4	0.0	0.6	1.3	0.2	0.4	0.9	1.1
11	0.4	0.6	0.7	1.3	0.3	1.3	1.6	0.8	1.4	0.9	0.7	0.9
12	0.7	0.1	0.2	0.2	0.0	0.9	1.2	0.7	1.6	1.4	0.5	0.7
13	0.4	0.2	1.3	1.2	0.1	1.1	0.6	0.2	1.1	1.3	0.8	0.2
14	0.5	0.6	1.2	1.3	1.6	0.9	0.7	0.2	1.2	1.2	0.9	0.5
15	0.6	0.9	0.5	0.1	0.4	0.2	1.3	0.7	1.2	1.1	0.6	0.3
16	0.8	0.8	0.2	0.9	0.4	0.5	1.0	1.4	1.2	1.1	0.3	0.4
17	1.2	0.5	0.5	1.4	0.2	0.5	0.6	1.2	1.4	0.5	0.3	0.1
18	1.1	0.2	1.0	1.3	0.2	0.5	0.2	1.2	1.2	1.0	0.5	0.0
19	1.0	0.2	1.1	0.7	0.1	1.1	0.3	1.2	1.1	1.2	0.2	0.1
20	0.3	0.6	0.9	0.5	0.6	0.5	1.2	0.9	1.0	0.8	0.9	0.7
21	0.2	0.8	1.1	0.2	0.5	0.2	0.8	0.6	1.3	0.4	0.4	1.4
22	0.5	0.4	0.8	0.0	0.8	0.1	0.3	0.7	0.9	0.0	0.1	0.9
23	0.3	1.7	0.8	1.3	0.5	0.7	0.5	1.4	0.2	0.1	1.2	1.3
24	0.3	1.4	0.3	0.7	0.3	0.6	0.5	1.1	0.2	0.0	1.7	1.0
25	0.3	1.1	0.2	0.0	0.2	0.4	1.1	1.0	0.1	0.7	1.4	0.7
26	0.2	0.4	1.5	0.0	0.1	0.3	0.7	0.8	0.2	0.7	1.3	1.1
27	0.3	0.8	0.5	0.8	1.2	0.2	1.1	0.6	0.5	0.3	0.8	0.3
28	0.7	1.4	0.0	1.0	0.9	0.9	0.9	0.1	0.2	1.6	1.3	0.2
29	0.3		0.9	0.2	0.2	1.0	0.6	0.1	0.2	1.9	0.8	0.1
30	0.3		0.7	0.8	0.3	0.9	0.5	0.6	0.2	1.4	0.3	0.0
31	0.1		0.6		0.1		0.4	0.5		1.3		0.0

Table 1-V--Local mean times for various geographic longitudes, λ, corresponding to Greenwich mean times

GMT	East longitude, λ, in degrees																								
	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360
h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
00	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01
02	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02
03	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03
04	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04
05	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05
06	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06
07	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07
08	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08
09	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09
10	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10
11	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11
12	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12
13	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13
14	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14
15	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
16	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
17	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
18	18	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
19	19	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
20	20	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
21	21	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
22	22	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
23	23	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
24	24	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00

Table 1-W--Conversion of arc to time

Conversions for 0° to 360°												Conversions for 0' to 60'		Conversions for 0" to 60"	
Arc	Time	Arc	Time	Arc	Time	Arc	Time	Arc	Time	Arc	Time	Arc	Time	Arc	Time
°	h m	°	h m	°	h m	°	h m	°	h m	°	h m	'	m s	"	s
0	00 00	60	04 00	120	08 00	180	12 00	240	16 00	300	20 00	0	0 00	0	0.00
1	00 04	61	04 04	121	08 04	181	12 04	241	16 04	301	20 04	1	0 04	1	0.07
2	00 08	62	04 08	122	08 08	182	12 08	242	16 08	302	20 08	2	0 08	2	0.13
3	00 12	63	04 12	123	08 12	183	12 12	243	16 12	303	20 12	3	0 12	3	0.20
4	00 16	64	04 16	124	08 16	184	12 16	244	16 16	304	20 16	4	0 16	4	0.27
5	00 20	65	04 20	125	08 20	185	12 20	245	16 20	305	20 20	5	0 20	5	0.33
6	00 24	66	04 24	126	08 24	186	12 24	246	16 24	306	20 24	6	0 24	6	0.40
7	00 28	67	04 28	127	08 28	187	12 28	247	16 28	307	20 28	7	0 28	7	0.47
8	00 32	68	04 32	128	08 32	188	12 32	248	16 32	308	20 32	8	0 32	8	0.53
9	00 36	69	04 36	129	08 36	189	12 36	249	16 36	309	20 36	9	0 36	9	0.60
10	00 40	70	04 40	130	08 40	190	12 40	250	16 40	310	20 40	10	0 40	10	0.67
11	00 44	71	04 44	131	08 44	191	12 44	251	16 44	311	20 44	11	0 44	11	0.73
12	00 48	72	04 48	132	08 48	192	12 48	252	16 48	312	20 48	12	0 48	12	0.80
13	00 52	73	04 52	133	08 52	193	12 52	253	16 52	313	20 52	13	0 52	13	0.87
14	00 56	74	04 56	134	08 56	194	12 56	254	16 56	314	20 56	14	0 56	14	0.93
15	01 00	75	05 00	135	09 00	195	13 00	255	17 00	315	21 00	15	1 00	15	1.00
16	01 04	76	05 04	136	09 04	196	13 04	256	17 04	316	21 04	16	1 04	16	1.07
17	01 08	77	05 08	137	09 08	197	13 08	257	17 08	317	21 08	17	1 08	17	1.13
18	01 12	78	05 12	138	09 12	198	13 12	258	17 12	318	21 12	18	1 12	18	1.20
19	01 16	79	05 16	139	09 16	199	13 16	259	17 16	319	21 16	19	1 16	19	1.27
20	01 20	80	05 20	140	09 20	200	13 20	260	17 20	320	21 20	20	1 20	20	1.33
21	01 24	81	05 24	141	09 24	201	13 24	261	17 24	321	21 24	21	1 24	21	1.40
22	01 28	82	05 28	142	09 28	202	13 28	262	17 28	322	21 28	22	1 28	22	1.47
23	01 32	83	05 32	143	09 32	203	13 32	263	17 32	323	21 32	23	1 32	23	1.53
24	01 36	84	05 36	144	09 36	204	13 36	264	17 36	324	21 36	24	1 36	24	1.60
25	01 40	85	05 40	145	09 40	205	13 40	265	17 40	325	21 40	25	1 40	25	1.67
26	01 44	86	05 44	146	09 44	206	13 44	266	17 44	326	21 44	26	1 44	26	1.73
27	01 48	87	05 48	147	09 48	207	13 48	267	17 48	327	21 48	27	1 48	27	1.80
28	01 52	88	05 52	148	09 52	208	13 52	268	17 52	328	21 52	28	1 52	28	1.87
29	01 56	89	05 56	149	09 56	209	13 56	269	17 56	329	21 56	29	1 56	29	1.93
30	02 00	90	06 00	150	10 00	210	14 00	270	18 00	330	22 00	30	2 00	30	2.00
31	02 04	91	06 04	151	10 04	211	14 04	271	18 04	331	22 04	31	2 04	31	2.07
32	02 08	92	06 08	152	10 08	212	14 08	272	18 08	332	22 08	32	2 08	32	2.13
33	02 12	93	06 12	153	10 12	213	14 12	273	18 12	333	22 12	33	2 12	33	2.20
34	02 16	94	06 16	154	10 16	214	14 16	274	18 16	334	22 16	34	2 16	34	2.27
35	02 20	95	06 20	155	10 20	215	14 20	275	18 20	335	22 20	35	2 20	35	2.33
36	02 24	96	06 24	156	10 24	216	14 24	276	18 24	336	22 24	36	2 24	36	2.40
37	02 28	97	06 28	157	10 28	217	14 28	277	18 28	337	22 28	37	2 28	37	2.47
38	02 32	98	06 32	158	10 32	218	14 32	278	18 32	338	22 32	38	2 32	38	2.53
39	02 36	99	06 36	159	10 36	219	14 36	279	18 36	339	22 36	39	2 36	39	2.60
40	02 40	100	06 40	160	10 40	220	14 40	280	18 40	340	22 40	40	2 40	40	2.67
41	02 44	101	06 44	161	10 44	221	14 44	281	18 44	341	22 44	41	2 44	41	2.73
42	02 48	102	06 48	162	10 48	222	14 48	282	18 48	342	22 48	42	2 48	42	2.80
43	02 52	103	06 52	163	10 52	223	14 52	283	18 52	343	22 52	43	2 52	43	2.87
44	02 56	104	06 56	164	10 56	224	14 56	284	18 56	344	22 56	44	2 56	44	2.93
45	03 00	105	07 00	165	11 00	225	15 00	285	19 00	345	23 00	45	3 00	45	3.00
46	03 04	106	07 04	166	11 04	226	15 04	286	19 04	346	23 04	46	3 04	46	3.07
47	03 08	107	07 08	167	11 08	227	15 08	287	19 08	347	23 08	47	3 08	47	3.13
48	03 12	108	07 12	168	11 12	228	15 12	288	19 12	348	23 12	48	3 12	48	3.20
49	03 16	109	07 16	169	11 16	229	15 16	289	19 16	349	23 16	49	3 16	49	3.27
50	03 20	110	07 20	170	11 20	230	15 20	290	19 20	350	23 20	50	3 20	50	3.33
51	03 24	111	07 24	171	11 24	231	15 24	291	19 24	351	23 24	51	3 24	51	3.40
52	03 28	112	07 28	172	11 28	232	15 28	292	19 28	352	23 28	52	3 28	52	3.47
53	03 32	113	07 32	173	11 32	233	15 32	293	19 32	353	23 32	53	3 32	53	3.53
54	03 36	114	07 36	174	11 36	234	15 36	294	19 36	354	23 36	54	3 36	54	3.60
55	03 40	115	07 40	175	11 40	235	15 40	295	19 40	355	23 40	55	3 40	55	3.67
56	03 44	116	07 44	176	11 44	236	15 44	296	19 44	356	23 44	56	3 44	56	3.73
57	03 48	117	07 48	177	11 48	237	15 48	297	19 48	357	23 48	57	3 48	57	3.80
58	03 52	118	07 52	178	11 52	238	15 52	298	19 52	358	23 52	58	3 52	58	3.87
59	03 56	119	07 56	179	11 56	239	15 56	299	19 56	359	23 56	59	3 56	59	3.93
60	04 00	120	08 00	180	12 00	240	16 00	300	20 00	360	24 00	60	4 0	60	4.00

Table 1-X--Multiplication table for 1 to 70 by 1.24, 0.76, 0.33, 0.16, and 0.09 for use in computing monthly means (M) from seasonal winter (W), equinox (E), and summer (S) means of periodic functions of time, symmetrical about July 1

Number	0	1	2	3	4	5	6	7	8	9	10
	1.24 times number										
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
0	0	1	2	4	5	6	7	9	10	11	12
1	12	14	15	16	17	19	20	21	22	24	25
2	25	26	27	29	30	31	32	33	35	36	37
3	37	38	40	41	42	43	45	46	47	48	50
4	50	51	52	53	55	56	57	58	60	61	62
5	62	63	64	66	67	68	69	71	72	73	74
6	74	76	77	78	79	81	82	83	84	86	87
7	87	88	89	91	92	93	94	95	97	98	99
	0.76 times number										
0	0	1	2	2	3	4	5	5	6	7	8
1	8	8	9	10	11	11	12	13	14	14	15
2	15	16	17	17	18	19	20	21	21	22	23
3	23	24	24	25	26	27	27	28	29	30	30
4	30	31	32	33	33	34	35	36	36	37	38
5	38	39	40	40	41	42	43	43	44	45	46
6	46	46	47	48	49	49	50	51	52	52	53
7	53	54	55	55	56	57	58	59	59	60	61
	0.33 times number										
0	0	0	1	1	1	2	2	2	3	3	3
1	3	4	4	4	5	5	5	6	6	6	7
2	7	7	7	8	8	8	9	9	9	10	10
3	10	10	11	11	11	12	12	12	13	13	13
4	13	14	14	14	15	15	15	16	16	16	16
5	16	17	17	17	18	18	18	19	19	19	20
6	20	20	20	21	21	21	22	22	22	23	23
7	23	23	24	24	24	25	25	25	26	26	26

Number	0	1	2	3	4	5	6	7	8	9	10
	0.16 times number										
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
0	0	0	0	0	1	1	1	1	1	1	2
1	2	2	2	2	2	2	3	3	3	3	3
2	3	3	4	4	4	4	4	4	4	5	5
3	5	5	5	5	5	6	6	6	6	6	6
4	6	7	7	7	7	7	7	8	8	8	8
5	8	8	8	8	9	9	9	9	9	9	10
6	10	10	10	10	10	10	11	11	11	11	11
7	11	11	12	12	12	12	12	12	12	13	13
	0.09 times number										
0	0	0	0	0	0	0	1	1	1	1	1
1	1	1	1	1	1	1	1	2	2	2	2
2	2	2	2	2	2	2	2	2	3	3	3
3	3	3	3	3	3	3	3	3	3	4	4
4	4	4	4	4	4	4	4	4	4	4	4
5	4	5	5	5	5	5	5	5	5	5	5
6	5	5	6	6	6	6	6	6	6	6	6
7	6	6	6	7	7	7	7	7	7	7	7

Formulas for monthly values

$M_{Jan} = M_{Dec} = +1.24\ W -0.33\ E +0.09\ S$

$M_{Feb} = M_{Nov} = +0.76\ W +0.33\ E -0.09\ S$

$M_{Mar} = M_{Oct} = -0.16\ W +1.00\ E +0.16\ S$

$M_{Apr} = M_{Sep} = +0.16\ W +1.00\ E -0.16\ S$

$M_{May} = M_{Aug} = -0.09\ S +0.33\ E +0.76\ S$

$M_{Jun} = M_{Jul} = +0.09\ W -0.33\ E +1.24\ S$

CHAPTER IV

METHOD OF REDUCTION OF MAGNETIC OBSERVATIONS

1. General plan.--In application of the tables to the reduction of magnetic observations to epoch and in the construction of magnetic charts, the work was arranged in sections as follows: (1) Transcription. (2) Tabulation. (3) Hand computation. (4) Machine computation. (5) Graphing. (6) Mapping. The present chapter deals with items (1) to (4); the methods of graphing and mapping will be discussed in Chapter V.

The work of reducing the magnetic observations was arranged conveniently on computing forms, the general procedures being indicated on each form by numbered columns in which were specified the arithmetical processes necessary. These forms comprise: (1) Form 19, shown in Figure 3-A, a summary sheet of the measurements made at a station corrected to International Magnetic Standard; (2) Form 19.1, shown in Figure 3-B, a summary and computing sheet of estimated departures of the Earth's field from normal, and summary of the measurements of Form 19 corrected for the effects of these; (3) Form 19.2, shown in Figure 3-C, a computing sheet for estimated departures derived from Tables 1-A to 1-X.

In the tabulation work the components of the individual departures of the Earth's field from normal for the times of its measurement were derived from Tables 1-A to 1-X, interpolating as necessary, and entered on Forms 19.1 and 19.2. These individual departures were obtained by suitable additions and multiplications by hand computation. In order to give corrections to the measured values of the Earth's field, the departures were summed and converted to required components and the sign reversed.

Derived components of intensity for the epoch of the middle of month of observation were obtained by machine computation.

Thus, Tables 1-A to 1-X served the function of removing from measurements of the Earth's field in various parts of the world the effects of extraneous magnetic fields. These fields, present at all times, cause the measured values in general to be either too high or too low, thus affecting accuracy of estimates of the change per annum in the measured values of the Earth's main field. If the change per annum or secular change can be accurately established by removing the extraneous effects, observations in earlier years can be used to estimate the corresponding values for an epoch as recent as 1945.

In the process of removing the extraneous effects or fluctuations, the observed values were reduced, on the general (simplifying) assumption made, to the epoch of the middle of the month of observation expressed as a year and decimal of a year, and the influences of the annual variation, and of the geomagnetic variation with sunspot-cycle, were removed. The secular variation remaining after reduction to the epoch of the middle of the month and removal of other effects was recognized as contributing some further discrepancies in the reduced values. These values were accepted, however, in preparing the graphs from which estimates were made of the secular variation at any epoch at each field station and observatory.

2. Transcription of data, geomagnetic surveys.--We now consider the plan of work in detail. Figure 3, A, B, and C, for land-survey station Suez C already has been referred to as illustrating computing forms and results of reductions. Observations made since 1905 were entered on these computing forms. Observations made in different months of the year were entered on separate sheets, and tentative weights were assigned which depended usually on the number of individual observations. The class of reoccupation (exact, close, practical, or proximate, as defined in volume VI of "Researches of the Department of Terrestrial Magnetism, Land Magnetic and Electric Observations, 1918-1926," p. 11, 1927) was also entered.

3. Tabulation of departures, station constants, and coefficients, using Tables 1-A to 1-X.--In the reduction of a magnetic field observation to epoch, four of the five corrections for geomagnetic variations were applied. The tabulating stage of work included the derivation of the various components of the departures in RV, AV, P, and Sq. Prior to the derivation of these quantities, however, it was necessary to determine the geomagnetic latitude of each observing station. Tables 1-A to 1-X were the bases for these derivations.

Tabulation of geomagnetic latitude.--In order to obtain the corrections for an observation, it is necessary to know the latitude and longitude of the station, and the time of occurrence and duration of the observation. Since certain magnetic phenomena vary mainly with geomagnetic latitude (Φ), in low and middle latitudes, and more closely with distance from the auroral zone in high and very low latitudes, use was made both of the geomagnetic latitude (Φ) and of a geomagnetic latitude (Φ') adjusted to a circular auroral zone. For stations between $\Phi = +60^\circ$ and $\Phi = -60^\circ$ inclusive, the geomagnetic latitude to the nearest degree was obtained from Table 1-A1 by taking the geographic latitude (ϕ) to the nearest degree and the east longitude (λ) to the nearest 5°. Where interpolation was necessary and the difference between successive values of Φ in Table 1-A1 was odd, both the degrees and minutes of ϕ were considered. North of $\Phi = +60^\circ$ and south of $\Phi = -60^\circ$, Φ' was employed instead of Φ. The value of Φ' was defined relative to the average auroral zones [see Terr. Mag., vol. 49, 77-102 (1944), Fig. 6, and vol. 50, 105-124 (1945), Fig. 6].[2] These are assumed to be at $\Phi = \pm 69^\circ$. The value Φ' was then obtained in northern latitudes by linear interpolation on a graph using ϕ and λ to the nearest degree. The average southern auroral zone as drawn varied between $\Phi = -68^\circ$ and $\Phi = -67^\circ.5$, and the tables varying with ϕ provide for a zone of maximum frequency at $\Phi = -69^\circ$. Therefore, $\Phi' = \Phi - 1^\circ$ was used from $\Phi = -61^\circ$ to -75°, inclusive. Φ or Φ' was customarily entered on the upper right-hand corner of Form 19.2 or the lower right-hand corner of Form 19.1.

Tabulation of geomagnetic departures with sunspot-cycle RV.--The geomagnetic departure due to sunspots was obtained from Tables 1-J and 1-K by linear interpolation. The value Φ (or Φ') was first used to the nearest degree; then Table 1-J1 was employed to facilitate the correction of the value of January 1 to the 15th of the local month. Where the observation was of longer duration than a month, the decimal of the year was used for interpolation. The departure so derived from Table 1-J was entered in column 12 on Form 19.1 for D, I, and H. The departure from Table

1-K was entered in the corresponding column for Z. If the observations extended over a complete year, only RV was necessary in the reduction to appropriate epoch.

Tabulation of geomagnetic departures due to annual variation AV.--The annual variation was read in eight parts from Tables 1-C, 1-D, 1-E, and 1-F. The value for the proper local month and year, or a mean value if the observations covered more than one month, was read from Table 1-C and entered in column 48 of Form 19.2 for D, I, and H. The corresponding latitude-factor, depending on Φ or Φ', was obtained from the other half of Table 1-C and entered in column 49. Table 1-D was similarly used for columns 50 and 51. Tables 1-E and 1-F were used instead of Table 1-C and Table 1-D in Z. The departure AV was applied to any observation which was not a mean for a complete year.

Tabulation of geomagnetic departures due to post-perturbation P.--The post-perturbation Tables 1-G and 1-H were designed to reduce the observation to the mean of the local month. They were found to be more easily used if the Greenwich mean time corresponding to the local mean time on Form 19.1 was entered on Form 19.2 from Table 1-V. Only the hours were corrected to GMT; the local minutes were merely copied from Form 19.1. In the case of South America, however, GMT correct to the nearest four minutes was employed. The value of P was derived from Table 1-G using Table 1-G1 to interpolate linearly between the values of Table 1-G. The nearest GMT hour (or the middle hour of the period of observation, if the latter was less than or equal to a day) was used. Where the period of observation extended over more than four days, the values of P were meaned for those days. If the period continued from one month into the next, the value of P was referred, with the aid of a supplementary Table 1-G2, to the month in which the major part of the observation was made. Table 1-G2 was also used to refer the post-perturbation to the local month if the latter differed from the Greenwich month. The P-value thus obtained was entered in column 55 of Form 19.2 for D, I, H, and Z. In column 56 the latitude-factor, depending upon Φ or Φ' to the nearest degree, was entered. All observations which extended over incomplete months were corrected for post-perturbation.

Tabulation of departures due to solar daily variation S_q.--The solar daily variation was estimated for any hour at any place using three sets of quantities: the 12-year average value along parallels of latitude given by months in Tables 1-L, 1-M, and 1-N; the longitude-effect listed by seasons in Tables 1-O and 1-P; and the daily amplitude-factor given in Table 1-Q. The appropriate values from Tables 1-L and 1-M were obtained by linear interpolation, first to the nearest degree of ϕ, then to the nearest tenth of an hour LMT, and entered on Form 19.2 in columns 42 and 67, respectively, for D, I, and H. Values were similarly derived from Table 1-N appropriate to the local hours listed under I on Form 19.1 and entered in column 42 of Z. To find the proper values from Tables 1-O and 1-P, interpolation was made first for the nearest degree of latitude, next for the nearest 5° of longitude, and lastly for the nearest tenth of an hour GMT. The values from Table 1-O were entered on Form 19.2 in columns 33, 35, and 37 for D, I, and H, and those from Table 1-P in columns 58, 60, and 62, respectively. Special auxiliary tables were used instead of 1-O and 1-P for a highly anomalous region in S_q, from $\phi = +20°$ to $\phi = -20°$, $\lambda = 260°$ E to $\lambda = 320°$ E. In columns 34, 36, 38, 59, 61, and 63 on Form 19.2 the coefficients from the formulas at the bottom of Table 1-X were entered for the given local month. The amplitude-factor was derived from Table 1-Q by linear interpolation with the aid of Tables 1-Q1, 1-Q2, or 1-Q3. The nearest hour or middle hour GMT of the observational period was used. If the observation was the mean of several days' observations at the same hour, a mean amplitude-factor (f_q) was noted and entered in column 44 for D, I, H, and Z, the times for Z being those hours listed under I. Any observation of less than a day in duration was corrected for S_q.

Tabulation of constants (or coefficients) A_D, B_D; A_H, B_H; A_I, and B_I of formulas for converting components of departures to departures in D, H, and I.--Because magnetic phenomena seem more simply described if expressed in geomagnetic components, Tables 1-A to 1-X list departures in terms of the geomagnetic north component (X′), east component (Y′), and vertical component (Z). It is customary for observers, however, to measure H, D, and I. It was therefore necessary to tabulate the coefficients A_D, B_D, A_H, B_H, A_I, and B_I so that the departures in X′, Y′, and Z might be converted into H, D, and I. These coefficients were obtained from Tables 1-S, 1-R, and 1-T, respectively, by linear interpolation, first to the nearest degree of latitude, then to the nearest degree of longitude, and entered on Form 19.1 in columns 25, 26, 27, 28, 29, and 30, respectively. The error introduced by linear interpolation was treated as negligible except in the regions of the magnetic poles. For these regions the values of the coefficients were usually computed directly from the observations themselves. Although these coefficients were regarded as constants for purposes of conversion, they are in fact really not constants at all, since they vary slowly with change in the main field.

Tabulation of the international magnetic character-figure C.--The international character-figures were customarily entered in column 3, Form 19.1. They served to indicate which days were magnetically disturbed, thus indicating which observations required correction for S_D or D_{st}. Satisfactory methods of making the latter corrections were not found except for observations in areas very near a magnetic observatory. The absence of tabulations of departures for the disturbance daily variation S_D, storm-time variation D_{st}, and irregular disturbance D_i for most of the data should be particularly noted. An attempt to provide useful tables for correction of these variations proved unsuccessful. It was found that values of departures taken from such tables detracted from the accuracy of the corrected values as frequently as they improved it. Such tests revealed the difficulties inherent in removing effects of S_D and D_{st}. Fortunately, this was not so important as might at first be suspected, since field observers rarely observed on highly disturbed days, and the greater part of the observations were made in low and middle latitudes.

4. Computation of total departures.--The tabulated departures were combined by means of the arithmetical processes indicated on the specimen forms shown in Figure 3. The computational processes were determined by formulas and definitions also indicated on the forms. There was finally obtained and entered in column 22 of Form 19.1 a correction to be added, with change of sign, to the observed value (or average observed value), to remove approximately the influence of RV, AV, P, and S_q upon the measured values of H, D, and I. The corrected values of H, D, and I were regarded as appropriate

to the epoch of the middle of the month of observation (see note at the top of column 72, Form 19.1), if one neglects a correction for secular change for a period not exceeding two weeks.

The corrected values of H, D, and I were finally used in machine computation of derived intensities of X, Y, Z, F.

Various tests were successfully made to indicate the value of the application of corrections for the departures in field caused by extraneous geomagnetic fluctuations. These tests were mainly applied to data from observatories.

For the majority of cases, it was found that the corrections for fluctuations, though helpful, were rather small. In other words, the corrected observed values, when graphed, gave only slight superiority in estimating secular change. However, numerous cases were found with large corrections. A satisfactory basis was not found for selecting for special treatment only those field observations having large corrections. This was somewhat unfortunate, since a great deal of work was done with only modest gain. In any case, it is now felt that the corrections applied could have been simplified by using special methods in many regions rather than by the use of a mainly uniform procedure for all, though this facilitated mass production. But it should be emphasized that the world-wide distributions of some of the transient geomagnetic fluctuations are complex. The adopted scheme of corrections actually provides a considerable over-simplification, and there is reliance to a considerable degree on assumptions. Although these assumptions may prove justified on an average basis, they are probably quite faulty in certain special cases, isolated only with difficulty and perhaps never with certainty. One may cite as an example the assumptions respecting amplitudes of geomagnetic fluctuations for south polar regions which at present are based on very incomplete information.

The problem could be solved for future computations of this kind by operating a simple portable magnetograph for one or more days at each repeat station during the absolute observations. The difficulties in determining the departures caused by extraneous fluctuations arise mainly in reductions from mean of hour to mean of day. The reductions from mean of day to the middle of the month of observation and the corrections for the geomagnetic variation with sunspot-cycle are simply and speedily estimated. If the stations also are occupied more frequently than in the past, a further gain in accuracy will result, as will be obvious later from inspection of the graphs in Chapter V showing corrected observations plotted as a function of time. In fact, it would be good practice to reduce the number of repeat stations in many regions and to occupy them two or three times as often. The use of a portable magnetograph at other than repeat stations is not at present recommended.

Experience with past data suggests that, if these procedures of measurement are followed, in future major undertakings of the present kind all corrections in declination except that provided by a portable magnetograph should be discarded. For horizontal intensity, the correction from the magnetograph would be used, together with those corrections provided in Tables 1-A to 1-X (excluding those giving departures from mean of hour to mean of day). In the case of vertical intensity, the corrections are usually much smaller than in horizontal intensity and are in general quite small in low latitudes. However, near the auroral zones all corrections for fluctuations are likely to be large.

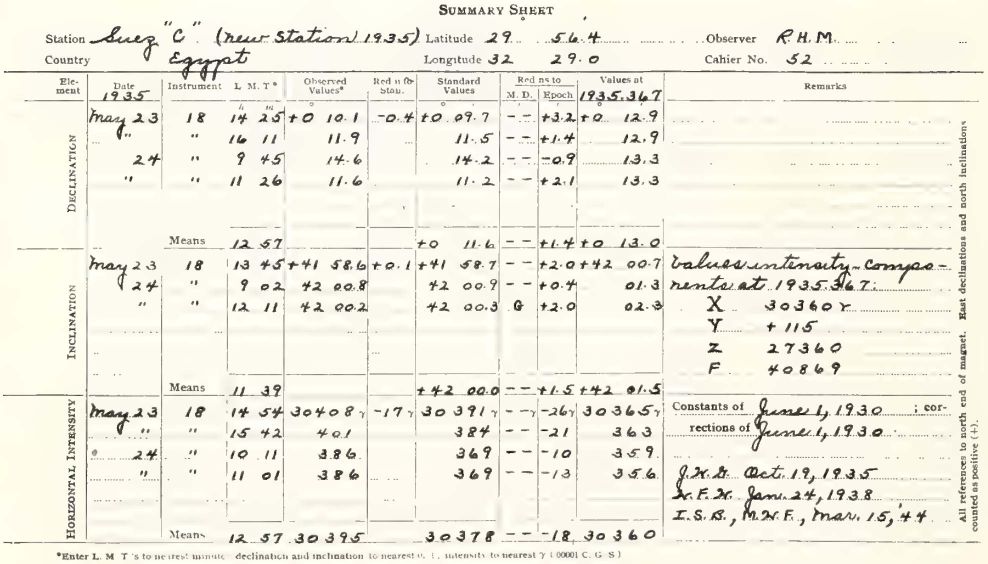
FIGURE 3

Figure Page

3(A). Specimen Form 19, for station Suez C, Egypt 142

3(B). Specimen Form 19.1, for station Suez C, Egypt 143

3(C). Specimen Form 19.2, continuation station Suez C, Egypt 144



SUMMARY SHEET

Station Suez "C" (new station 1935) Latitude 29° 56'.4 Observer R. H. M.
Country Egypt Longitude 32 29.0 Cahier No. 52

Element	Date 1935	Instrument	L. M. T.* h m	Observed Values* ° '	Red'n to Stan.	Standard Values ° '	Red'ns to M. D. '	Red'ns to Epoch '	Values at 1935.367 ° '	Remarks
DECLINATION	May 23	18	14 25	+0 10.1	-0.4	+0 09.7	- -	+3.2	+0 12.9	
	"	"	16 11	11.9		11.5	- -	+1.4	12.9	
	24	"	9 45	14.6		14.2	- -	-0.9	13.3	
	"	"	11 26	11.6		11.2	- -	+2.1	13.3	
		Means	12 57			+0 11.6	- -	+1.4	+0 13.0	
INCLINATION	May 23	18	13 45	+41 58.6	+0.1	+41 58.7	- -	+2.0	+42 00.7	values intensity-compo-
	24	"	9 02	42 00.8		42 00.9	- -	+0.4	01.3	nents at 1935.367:
	"	"	12 11	42 00.2		42 00.3	G	+2.0	02.3	X 30360γ
										Y +115
										Z 27360
										F 40869
		Means	11 39			+42 00.0	- -	+1.5	+42 01.5	
HORIZONTAL INTENSITY	May 23	18	14 54	30408γ	-17γ	30391γ	- -γ	-26γ	30365γ	Constants of June 1, 1930 ; cor-
	"	"	15 42	401		384	- -	-21	363	rections of June 1, 1930
	24	"	10 11	386		369	- -	-10	359	
	"	"	11 01	386		369	- -	-13	356	J.H.G. Oct. 19, 1935
										H.F.H. Jan. 24, 1938
										I.S.B., M.H.F., Mar. 15, '44
		Means	12 57	30395		30378	- -	-18	30360	

All references to north end of magnet. East declinations and north inclinations counted as positive (+).

*Enter L. M. T.'s to nearest minute; declination and inclination to nearest 0'.1; intensity to nearest γ (.00001 C. G. S.)

FIG. 3(A)—SPECIMEN FORM 19, FOR STATION SUEZ "C", EGYPT

ESTIMATED GEOMAGNETIC DEPARTURES, MEAN OF HOUR (MH) FROM MEAN OF YEAR (MY_0) CENTERED ABOUT MEAN OF MONTH (MM_0)
INCLUDING YEARLY DEPARTURE OWING TO VARIATION WITH SUNSPOT-CYCLE (RV)

STATION: Suez, C
COUNTRY: Egypt, Africa

FORMULAS: $\Delta D = A_D \Delta X' + B_D \Delta Y'$; $\Delta H = A_H \Delta X' + B_H \Delta Y'$; $\Delta I = A_I \Delta H_I + B_I \Delta Z_I$

A_D = -.026 (25), B_D = .111 (26), A_H = .974 (27), B_H = .227 (28), A_I = -.057 (29), B_I = .063 (30)

			Geomagnetic north component, $\Delta X'$									Geomagnetic east component, $\Delta Y'$										
												MH to MD										
Element (1)	Date and local mean time (2)	C (3)	For S_q (4)=(45)	For S_D (5)	For D_{st} (6)	For D_i (7)	(8)	For MM_0 to MY_0 (9)=(54)	For MD to MM_0 (10)=(57)	For RV (11)	Total departure on MY_0 = Σ (12)	For S_q (13)=(69)	For S_D (14)	For D_{st} (15)	For D_i (16)	(17)	For MH to MY_0 = Σ (18)	Product (19)	Product (20)	ΔH_I = Σ (21)	For MH to MY_0 = Σ (22)	Values of elements for epoch Y_0 (1935.367) = [(Observed IMS values at station) - (22)] (72)
D											(4) to (11)						(13) to (16)	(25) X (12)	(26) X (18)		(19) + (20)	
	1935 h m		γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	′	′		′	°
	May 23 14.4	0.1	+24	0	0	0	...	+8	-6	+7	+33	-21	0	0	0	...	-21	-.9	-2.3		-3.2	D = +0 13.0
	16.2	0.1	+11	0	0	0	...	+8	-6	+7	+20	-8	0	0	0	...	-8	-.5	-0.9		-1.4	cos D = +.99999
	May 24 9.8	0.0	-9	0	0	0	...	+8	0	+7	+6	+10	0	0	0	...	+10	-.2	+1.1		+0.9	sin D = +.00378
	11.4	0.0	+4	0	0	0	...	+8	0	+7	+19	-14	0	0	0	...	-14	-.5	-1.6		-2.1	
																					-1.4	
I											(4) to (11)						(13) to (16)	(27) X (12)	(28) X (18)	(19) + (20)	(23) + (24)	
			γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	′	°
	May 23 13.8	0.1	+25	0	0	0	...	+8	-6	+7	+34	-24	0	0	0	...	-24	+33.1	-5.4	+27.7	-2.0	I = +42 01.5
	May 24 9.0	0.0	-14	0	0	0	...	+8	-1	+7	0	+20	0	0	0	...	+20	0	+4.5	+4.5	-0.4	sec I = +1.34616
	12.2	0.0	+14	0	0	0	...	+8	0	+7	+29	-19	0	0	0	...	-19	+28.2	-4.3	+23.9	-2.0	tan I = +.90120
																					-1.5	
H											(4) to (11)						(13) to (16)	(27) X (12)	(28) X (18)		(19) + (20)	
			γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ		γ	
	May 23 14.9	0.1	+22	0	0	0	...	+8	-6	+7	+31	-19	0	0	0	...	-19	+30	-4		+26	H = 30360 γ
	15.7	0.1	+16	0	0	0	...	+8	-6	+7	+25	-12	0	0	0	...	-12	+24	-3		+21	F = H sec I = 40869 γ
	May 24 10.2	0.0	-6	0	0	0	...	+8	0	+7	+9	+4	0	0	0	...	+4	+9	+1		+10	Z = H tan I = 27360 γ
	11.0	0.0	0	0	0	0	...	+8	0	+7	+15	-10	0	0	0	...	-10	+15	-2		+13	X = H cos D = 30360 γ
																					+18	Y = H sin D = +11.5 γ
																						X^2 = 921729600
			Magnetic vertical component, ΔZ									Component ΔI										Y^2 = 13225
												$A_I \cdot \Delta H_I$ (23)	$B_I \cdot \Delta Z_I$ (24)									Z^2 = 748569600
Z											(4) to (11)	(29) X (21)	(30) X (12)									F^2 = 1670275161
			γ	γ	γ	γ	γ	γ	γ	γ	γ	′	′									
	May 23 13.8	0.1	-6	0	0	0	...	0	+1	-1	-6	-1.6	-.4									
	May 24 9.0	0.0	0	0	0	0	...	0	0	-1	-1	-0.3	-.1									
	12.2	0.0	-9	0	0	0	...	0	0	-1	-10	-1.4	-.6									

LEGEND

C = International magnetic character-figure
S_q = Solar daily variation
S_D = Disturbance daily variation
D_{st} = Storm-time variation
D_i = Irregular disturbance
RV = Geomagnetic variation yearly means with sunspot-cycle

Enter components magnetic intensity to nearest γ, D and I to nearest 0.′1

Entries for $\Delta X'$, $\Delta Y'$, ΔH_I, and ΔZ_I against elements I and Z when Z is not observed are for times of observation of I

FIG. 3(B)—SPECIMEN FORM 19.1, FOR STATION SUEZ "C", EGYPT

COMPUTATION OF GEOMAGNETIC DEPARTURES, MEAN OF HOUR (MH) FROM MEAN OF YEAR (MY_0) CENTERED ABOUT MEAN OF MONTH (MM_0)

STATION. Suez, C

COUNTRY. Egypt, Africa

DATE. May 23, 1935

Φ ______ °

Element (31)	Greenwich mean time (32)	Geomagnetic north component, ΔX′																									Geomagnetic east component, ΔY′													
		Estimated departures, solar daily variation, Sq															Departures annual variation, AV							Post-perturbation			Estimated departures, solar daily variation, Sq													
		Monthly from seasonal mean departures, $\delta X'_{q\lambda}$																									Monthly from seasonal mean departures, $\delta Y'_{q\lambda}$													
		W (33)	w (34)	E (35)	e (36)	S (37)	s (38)	W·w (39)	E·e (40)	S·s (41)	$\delta X'_{qp}$ (42)	Σ (43)	f_q (44)	$\delta X'_q$ (45)	(46)	(47)	AV_{sy} (48)	f_{sy} (49)	AV_{si} (50)	f_{si} (51)	$AV_{sy} \cdot f_{sy}$ (52)	$AV_{si} \cdot f_{si}$ (53)	$\delta X'_{AV}$ (54)	P (55)	f_p (56)	$\delta X'_p$ (57)	W (58)	w (59)	E (60)	e (61)	S (62)	s (63)	W·w (64)	E·e (65)	S·s (66)	$\delta Y'_{qp}$ (67)	Σ (68)	$\delta Y'_q$ (69)	(70)	(71)
D								(33)x(34)	(35)x(36)	(37)x(38)		(39) to (42)		(43)x(44)							(48)x(49)	(50)x(51)	(52)+(53)			(55)x(56)							(58)x(59)	(60)x(61)	(62)x(63)		(64) to (67)	(44)x(68)		
	h m	γ		γ		γ		γ	γ	γ	γ	γ		γ			γ		γ		γ	γ	γ	γ		γ	γ		γ		γ		γ	γ	γ	γ	γ	γ		
	12.4	+11	-0.09	+23	+0.33	+17	+0.76	-1	+8	+13	+4	+24	1.0	+24	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	-5	+1.26	-6	+8	-0.09	+3	+0.33	-3	+0.76	-1	+1	-2	-19	-21	-21	...	...
	14.2	-1	-0.09	+9	+0.33	+13	+0.76	0	+3	+10	-2	+11	1.0	+11	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	-5	+1.26	-6	+2	-0.09	+4	+0.33	0	+0.76	0	+1	0	-9	-8	-8	...	...
	7.8	+12	-0.09	-2	+0.33	-11	+0.76	-1	-1	-8	-1	-11	0.8	-9	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	0	+1.26	0	-6	-0.09	-3	+0.33	+4	+0.76	+1	-1	+3	+9	+12	+10	...	...
	9.4	+19	-0.09	+13	+0.33	0	+0.76	-2	+4	0	+3	+5	0.8	+4	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	0	+1.26	0	-5	-0.09	-3	+0.33	-1	+0.76	0	-1	-1	-15	-17	-14	...	...
I																																								
	11.8	+16	-0.09	+25	+0.33	+17	+0.76	-1	+8	+13	+5	+25	1.0	+25	...	...	+5.9	+8.5	+4.2	+.72	+5	+3	+8	-5	+1.26	-6	+8	-0.09	+1	+0.33	-1	+0.76	-1	0	-1	-22	-24	-24	...	...
	7.0	+7	-0.09	-10	+0.33	-16	+0.76	-1	-3	-12	-2	-18	0.8	-14	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	-1	+1.26	-1	-4	-0.09	-3	+0.33	+7	+0.76	0	-1	+5	+21	+25	+20	...	...
	10.2	+20	-0.09	+20	+0.33	+9	+0.76	-2	+7	+7	+5	+17	0.8	+14	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	0	+1.26	0	0	-0.09	-2	+0.33	0	+0.76	0	-1	0	-23	-24	-19	...	...
H																																								
	12.9	+8	-0.09	+21	+0.33	+18	+0.76	-1	+7	+14	+2	+22	1.0	+22	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	-5	+1.26	-6	+9	-0.09	+5	+0.33	-4	+0.76	-1	+2	-4	-16	-19	-19	...	...
	13.7	+2	-0.09	+14	+0.33	+15	+0.76	0	+5	+11	0	+16	1.0	+16	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	-5	+1.26	-6	+5	-0.09	+4	+0.33	-2	+0.76	0	+1	-2	-11	-12	-12	...	...
	8.2	+14	-0.09	+2	+0.33	-9	+0.76	-1	+1	-7	0	-7	0.8	-6	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	0	+1.26	0	-6	-0.09	-3	+0.33	+2	+0.76	+1	-1	+2	+3	+5	+4	...	...
	9.0	+18	-0.09	+9	+0.33	-4	+0.76	-2	+3	-3	+2	0	0.8	0	...	...	+5.9	+.85	+4.2	+.72	+5	+3	+8	0	+1.26	0	-7	-0.09	-3	+0.33	-1	+0.76	+1	-1	-1	-11	-12	-10	...	...
		Magnetic vertical component, ΔZ																																						
Z																																								
	11.8	0	-0.09	0	+0.33	0	+0.76	0	0	0	-6	-6	1.0	-6	...	...	+4.8	-.13	+0.6	+1.6	-1	+1	0	-5	-0.14	+1														
	7.0	0	-0.09	0	+0.33	0	+0.76	0	0	0	0	0	0.8	0	...	...	+4.8	-.13	+0.6	+1.6	-1	+1	0	-1	-0.14	0														
	10.2	0	-0.09	0	+0.33	0	+0.76	0	0	0	-11	-11	0.8	-9	...	...	+4.8	-.13	+0.6	+1.6	-1	+1	0	0	-0.14	0														

LEGEND

$\delta X'_{q\lambda}$ and $\delta Y'_{q\lambda}$ = Mean hourly values geomagnetic north and east components of departures of S_q from corresponding values of S_q averaged around parallels geographic latitude

W, E, and S = Corresponding tabular mean hourly departures $\delta X'_{q\lambda}$ or $\delta Y'_{q\lambda}$ averaged for winter, equinox, and summer for Greenwich hour of observation

w, e, and s = Tabular monthly multiplicative factors for W, E, and S, yielding products whose sum is estimated corresponding mean monthly departure of $\delta X'_{q\lambda}$ or $\delta Y'_{q\lambda}$

$\delta X'_{qp}$, $\delta Y'_{qp}$, and δZ_{qp} = Tabular mean hourly values geomagnetic north, east, and vertical components of S_q averaged around parallels geographic latitude

$\delta X'_q$, $\delta Y'_q$, and δZ_q = Geomagnetic north, east, and vertical components of S_q

f_q = Tabular daily multiplicative factor yielding estimated daily value of S_q from its monthly mean value

AV_{sy} and AV_{si} = Symmetrical and sinusoidal parts of annual variation

f_{sy} and f_{si} = Corresponding multiplicative factors yielding AV_{sy} and AV_{si} in any geomagnetic latitude

$\delta X'_{AV}$, $\delta Y'_{AV}$, and δZ_{AV} = Geomagnetic north, east, and vertical components of AV

P = Daily tabular values geomagnetic post-perturbation as expressed by daily mean departures from monthly mean

f_p = Tabular multiplicative factor yielding P in any geomagnetic latitude

$\delta X'_p$ and δZ_p = Geomagnetic north and vertical components of P

FIG. 3(C)—SPECIMEN FORM 19.2, CONTINUATION STATION SUEZ "C", EGYPT

CHAPTER V

GRAPHS OF REDUCED OBSERVATORY AND SURVEY-STATION VALUES

1. Graphing procedure for observatories.--We first discuss the graphing procedure used for observatory values. Specimens of graphing forms 19.4 and 19.5 are presented in Figure 4, A and B, on which are shown the plotted points for repeat-station Suez as given by the reduced observational values obtained after applying the corrections discussed in Chapter IV. Annual mean values corrected for RV, the sunspot effect, were similarly plotted for all observatories for the components D, H, and I on Form 19.4 and for X, Y, Z, and F on Form 19.5. Where observatory operation was not continuous, field observations at or near the site were used as supplementary data and points plotted from these have been shown with crossed symbols. When a site was changed during the years of observation, adjustments in values were made when possible, usually to the site longest occupied, using station differences derived from graphs, maps, or listed differences from published sources. In cases where change of site occurred, the geographic position given on the graph refers to the station to which all values were adjusted, and this station is listed first at the top of the graph.

For each observatory, smoothed curves were drawn best fitting the points for D, H, and I on Form 19.4, and these curves were extrapolated to 1905 and 1945, when this was considered feasible and the time interval was not too long. Scalings were made from these curves at five-year intervals, and the corresponding values of X, Y, Z, and F were computed and plotted on Form 19.5. With these points added on Form 19.5 to those already derived from reduced observational values, it was possible to draw smoothed curves for X, Y, Z, and F which were mutually consistent with the adopted curves for D, H, and I.

Values of secular change were next derived from the slopes of the graphs in each component and recorded on Form 19.3 (Figure 5). Scalings for secular change were made for epochs 1912.5, 1922.5, 1932.5, and 1942.5. Some use was made of graphs of the secular changes with time, and they proved valuable in revision of the original scalings when marked irregularities were present.

2. Graphing procedure for repeat stations.--In the case of field stations on land the locations of all stations were first recorded on large-scale sectional maps. In this way, by noting the proximity of various stations to one another, a list was compiled of repeat stations at which there had been in the past exact, close, practical, or proximate reoccupations.

The reduced observed values for each repeat station were then graphed as in Figure 4 to provide estimates of secular change at the station or in its immediate neighborhood. In a region where there was local magnetic disturbance, only exact or close reoccupations could be used, although it was possible to employ station differences in some cases. The data for many repeat stations were discarded when considered inferior to those obtained at nearby locations. The graphs were finally scaled in the same manner as that employed for observatories.

3. Sample graphs of reduced field-components 1905 to 1945 at selected stations.--It was originally proposed to publish all repeat-station and observatory graphs constructed for purposes of estimating secular change. To do so would have extended the present book into several volumes consisting chiefly of graphs awkwardly presented because of their varying lengths. The variation in length occurred because the same intensity and time-scales were used on graphs for all stations. A further point against publication of all graphs was the fact that graphs for closely neighboring stations tend to resemble one another. Thus there would be on successive pages of these volumes much apparent repetition of graphs, even though the secular changes estimated as time differentials of the functions varied considerably. Accordingly, graphs for only 11 repeat stations are presented here with those for 99 observatories, in Figures 6 to 115.

For a number of the graphs based on only a moderate amount of data, it was found by experiment that several individuals, drawing the curves by eye, arrived at graphs showing considerable variety in character (an important reflection upon the caution necessary in using this material). There were, furthermore, extremely few repeat-station graphs based on exact reoccupations throughout. Many graphs drawn included observations at only two epochs during the 40-year period, and in such cases the straight-line approximations of course yield estimated secular changes which would be expected to be faulty. In fact, of the approximately four thousand graphing sheets, perhaps as many as one thousand had merely straight lines for one or more field-components. These had a certain value in many regions where data were scanty, since they provided at least an indication of the magnitude and sign of secular change. However, it could be determined in a few cases of scanty data that even the sign of the estimated secular change was given incorrectly. Where this was the case, the stations were usually at places where the secular change was small and in regions between isoporic foci of opposite signs. For the stations visited only twice, future observations may define more clearly the probable trend of the secular change. The graphs of doubtful value have accordingly been retained among several thousand of more reliable nature, and the entire collection has been microfilmed for limited distribution primarily to surveying and cartographical agencies.

In graphing reduced observations for estimating secular change, it is at all times important to bear clearly in mind that the estimates of secular change are furnished by differentials of the curves of field-components. This provides an important limiting factor to their accuracy. Over a 40-year period, as in the present case, graphs drawn on the basis of four to six observational points may yield estimates of secular change which frequently are surprisingly different at adjacent stations. Accordingly, in future survey work at stations from which accurate values are desired, it will be essential to obtain observations at more frequent and more systematic time-intervals than has been customary in the past.

These considerations have equal weight in the construction of isoporic charts to accompany charts of the main field for an epoch only a year or two in the future. The isoporic charts are likely to afford somewhat cruder approximations than the cartographer might be inclined to wish. From a practical standpoint, however, the defects may not be particularly serious for present needs in navigation, since rates of change of field with time are not especially large in declination except near the magnetic poles; the navigator may, therefore, if he applies a correction at all, make a small one with the wrong sign, through the fault of the cartographer, without serious consequences. It is likewise clear that an isoporic chart constructed for an epoch some years in the past will be of greater average accuracy in all regions than a chart constructed for the present or a future epoch. It is also well to stress the importance of secular-change estimates afforded by continuously recording magnetic observatories and the importance to the cartographer of prompt publication of the mean annual values.

In carrying out the present project of constructing isoporic charts for various epochs, there was frequent opportunity to reflect upon the ability of field-stations as compared with magnetic observatories in providing reliable estimates of secular change. Even though a field-station may be reoccupied as frequently as once in ten years, there are likely to be years in certain areas for which the estimated error in secular change may be as great as 100 per cent. Estimates of secular change obtained from graphs of annual mean observatory values of a magnetic component provide a superior class of data.

Figures 6 to 115 show the variation of the Earth's main field with time for observatories scattered over the Earth's surface, grouped with respect to continent or territory, or to island groups in various oceans. Within each group the stations are arranged according to latitude. Included also are results for a few field-stations at points well removed from any magnetic observatory.

In northern Africa, the values of H have been increasing, but they have shown marked decreases in the south. If this decrease should continue for two centuries, the horizontal component would be reduced to zero. There has been rapid decrease in declination during the 40-year period, especially in the south, the rate of diminution decreasing with increasing time. In vertical intensity rapid decrease has occurred in northwest Africa, with increases prevailing on the east.

In Eurasia, there were decreases in horizontal intensity in the early part of the 40-year period. In the southern half of this region there have been increases in recent years. In declination notable increases have occurred in Europe and decreases in eastern Asia. The vertical intensity has been increasing most rapidly in central Asia.

In Australasia, the horizontal intensity increased in the earlier years in the East Indies, and showed decreases followed by increases in Australia and New Zealand. Stations in Western Australia have shown slow increases in declination since the beginning of the century and by 1940 these have extended over almost all Australasia. There have been moderate rates of change in vertical intensity.

In North and South America, decreases in the horizontal component and declination have predominated during the past 40 years. The vertical component has decreased except in northwestern South America, where stations have shown marked increase in value.

The North Atlantic area, as indicated by San Miguel, has experienced increases in horizontal intensity, decreases in declination, and marked decreases in vertical intensity. In the Indian Ocean, rapid changes in all components have been found. In the Pacific Ocean, the changes have been smaller than in other areas, usually showing decreases in horizontal intensity and increases in declination and vertical intensity.

These features will be further discussed later in this volume in connection with isoporic charts of all components constructed for four epochs at 10-year intervals.

FIGURES 4 - 5

Figure — Page

4(A). Specimen graphing Form 19.4, with graphs of D, H, and I, for Suez, Egypt . . 148

4(B). Specimen graphing Form 19.5, with graphs of X, Y, Z, and F, for Suez, Egypt. 149

5. Specimen Form 19.3, for stations Suez and Helwan, Egypt 150

FIGURES 6 - 104

Graphs showing variation of the Earth's main field with time
for magnetic observatories

Figure — Page

6- 10. Africa 151
11- 31. Asia 156
32- 34. Australasia 177
35- 79. Europe 180
80- 87. North America 225
88. Central America 233
89- 93. South America 234
94- 95. Islands, Atlantic Ocean 239
96- 98. Islands, Indian Ocean 241
99-103. Islands, Pacific Ocean 244
104. Islands, Arctic Ocean 249

FIGURES 105 - 115

Graphs showing variation of the Earth's main field with time
for magnetic repeat stations

Figure — Page

105. Africa 250
106. Australasia 251
107-110. North America 252
111. Islands, Pacific Ocean 256
112-115. Islands, Antarctic Ocean 257

VALUES OF D, H, AND I

Station *SUEZ* Latitude *29° 58′*

Country *EGYPT, AFRICA* Longitude *32° 33′ E*

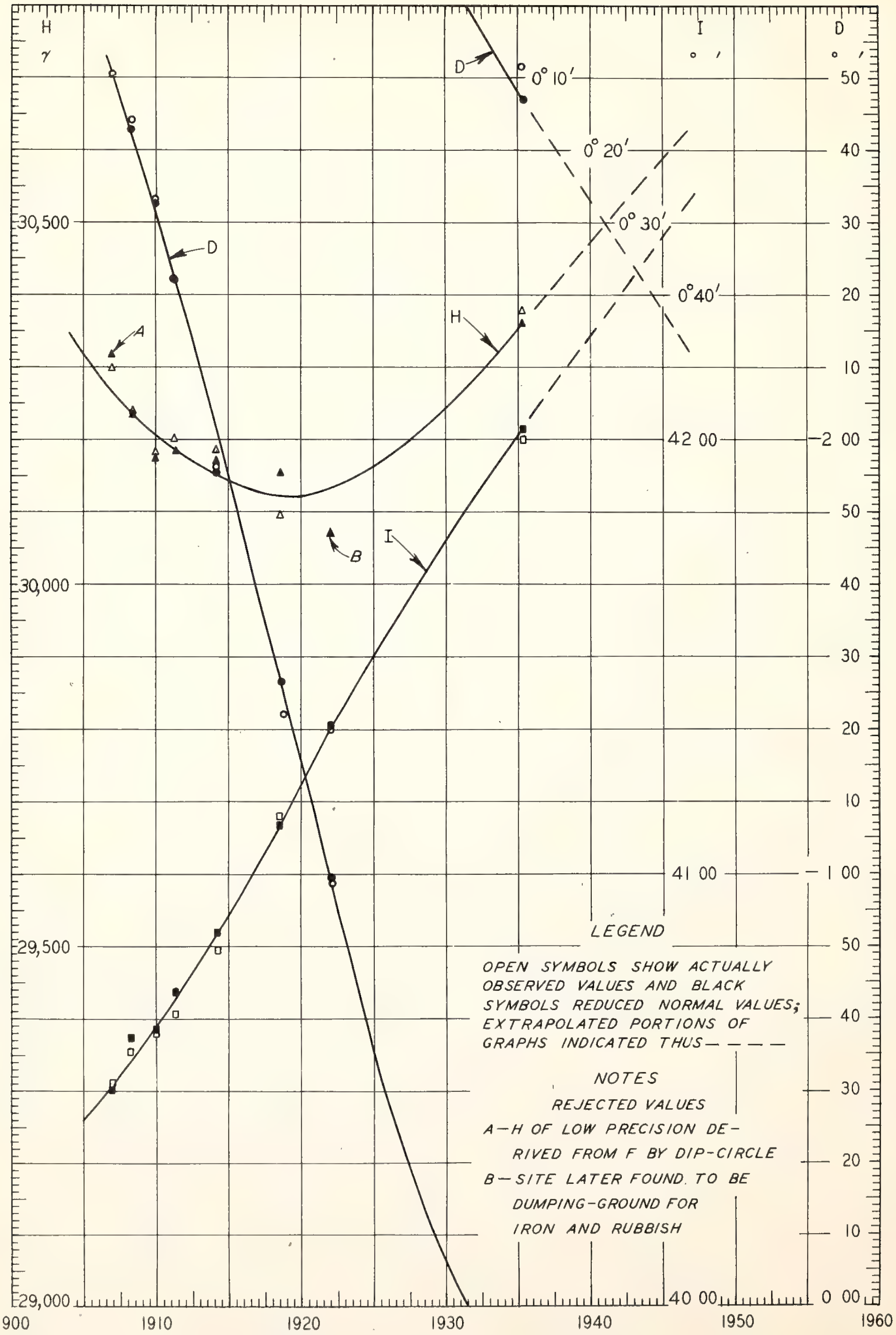
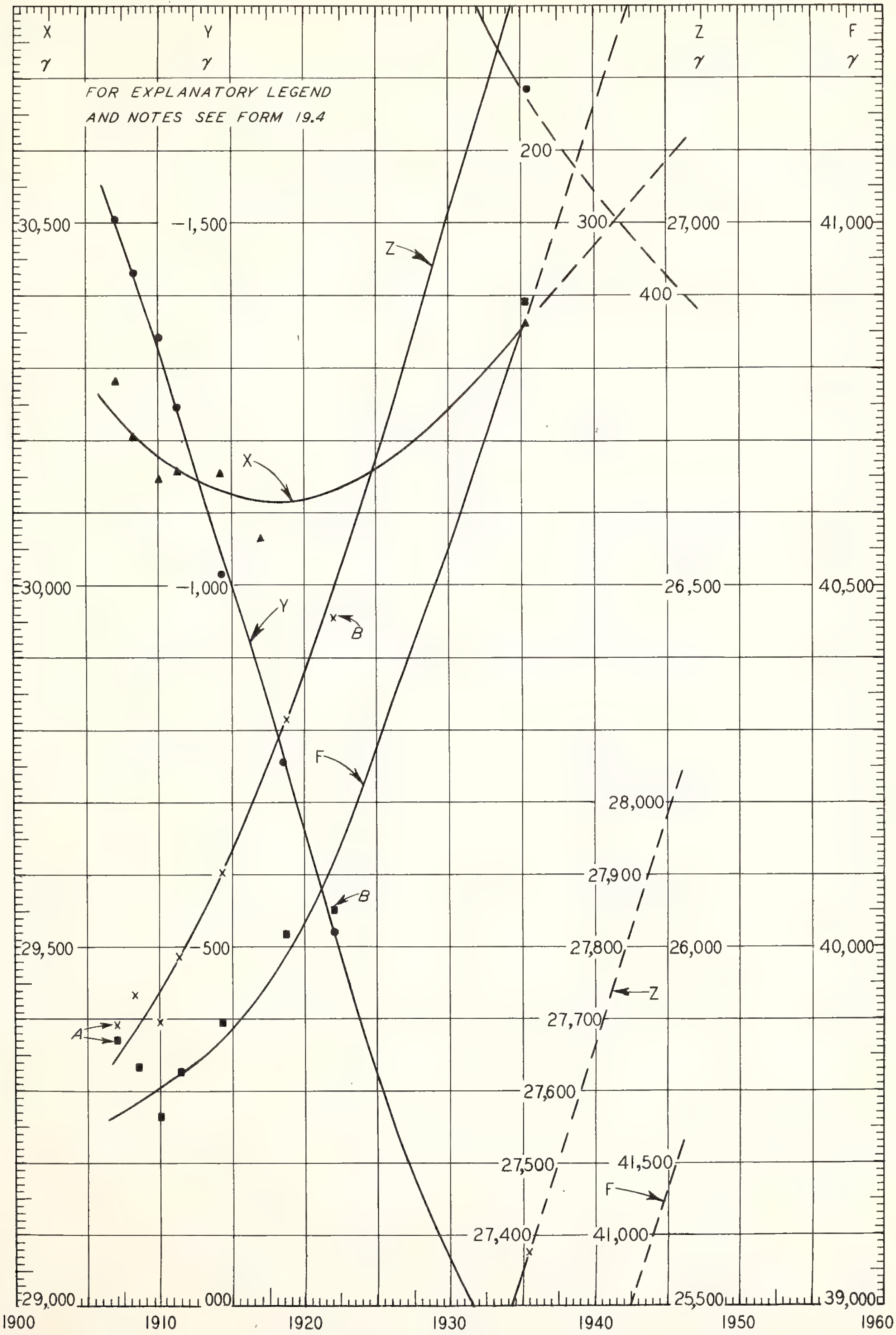


FIG. 4(A)—SPECIMEN GRAPHING FORM 19.4, WITH GRAPHS OF D, H, AND I, FOR SUEZ, EGYPT

VALUES OF X, Y, Z, AND F

Station *SUEZ* Latitude *29° 58'*

Country *EGYPT, AFRICA* Longitude *32° 33' E*



FOR EXPLANATORY LEGEND AND NOTES SEE FORM 19.4

FIG. 4(B)—SPECIMEN GRAPHING FORM 19.5, WITH GRAPHS OF X, Y, Z, AND F, FOR SUEZ, EGYPT

MAGNETIC ELEMENTS AND THEIR SECULAR VARIATIONS BY EPOCHS

Station Suez (A, B, and C)
Country Egypt, Africa
Latitude + 29° 58′
Longitude 32° 33′ E
Computed by Lgm and I.L.
Checked by I.S.B.
Date March 11, 1944
Date March 13, 1944

Element	1910		1912.5		1920		1922.5		1930		1932.5		1940		1942.5		1950		1952.5		1960		1962.5	
	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV
D				+7.4				+6.6				+4.5				+3.6								
I				+3.2				+3.2				+3.2				+3.2								
H				-8				+5				+21				+32								
X				-6				+6				+23				+40								
Y				+66				+58				+40				+31								
Z				+33				+56				+70				+76								
F				+9				+39				+72				+86								

Station Helwan
Country Egypt, Africa
Latitude + 29° 51.6′
Longitude 31° 20.5′ E
Computed by Lgm
Checked by I.L.
Date March 15, 1944
Date March 15, 1944

Element	1910		1912.5		1920		1922.5		1930		1932.5		1940		1942.5		1950		1952.5		1960		1962.5	
	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV	Value	SV
D				+7.6				+7.8				+5.0				+4.1								
I				+2.7				+3.1				+2.8				+2.7								
H				-11				+3				+33				+36								
X				-5				+5				+35				+41								
Y				+66				+68				+42				+37								
Z				+32				+53				+71				+81								
F				+20				+34				+70				+83								

FIG. 5—SPECIMEN FORM 19.3, FOR STATIONS SUEZ AND HELWAN, EGYPT

VALUES OF D, H, AND I

Station HELWAN Latitude 29° 52′

Country EGYPT, AFRICA Longitude 31° 20′ E

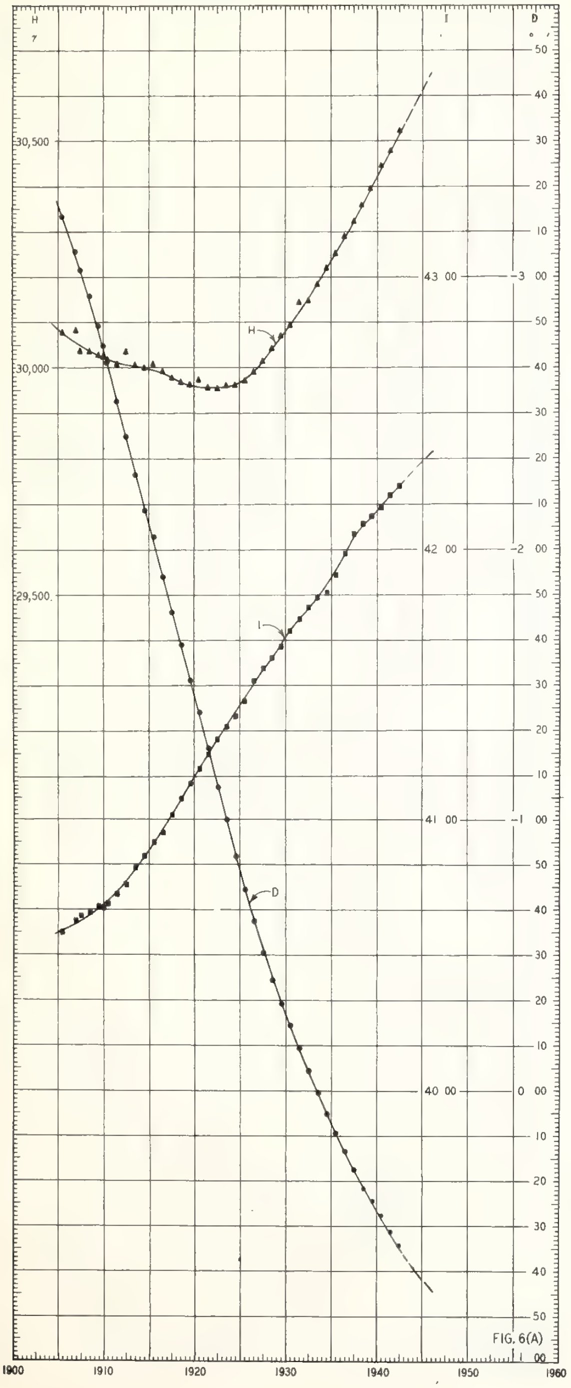


FIG. 6(A)

VALUES OF X, Y, Z, AND F

Station HELWAN Latitude 29° 52′

Country EGYPT, AFRICA Longitude 31° 20′ E

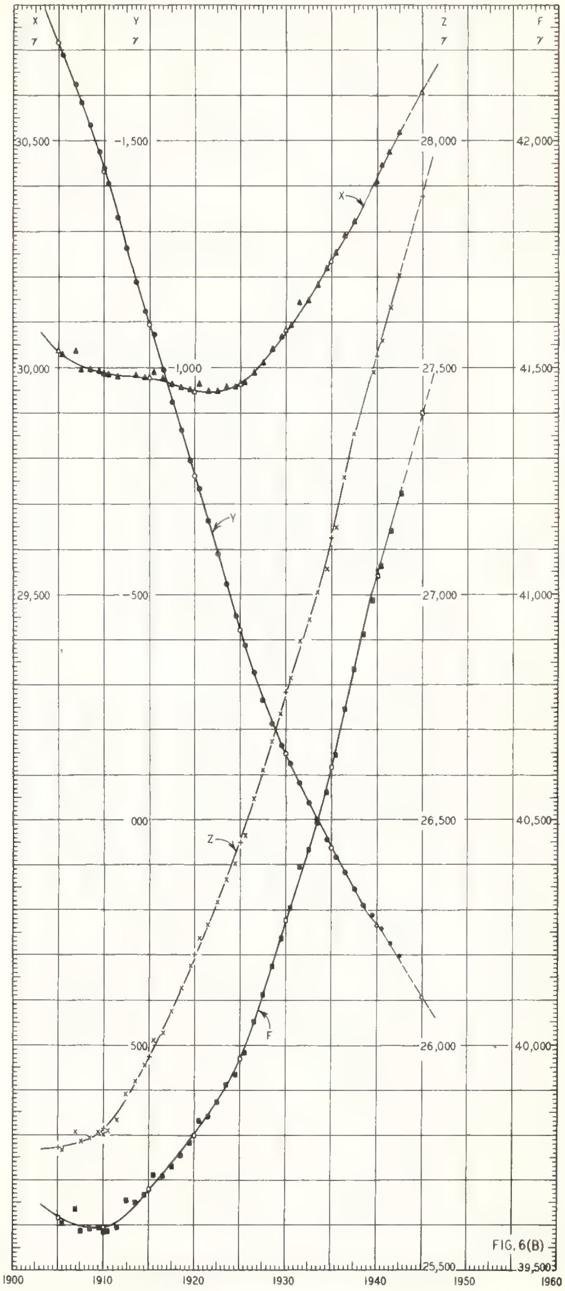


FIG. 6(B)

VALUES OF D, H, AND I

Station *TAMANRASSET* Latitude *22° 48′*

Country *FRENCH WEST AFRICA, AFRICA* Longitude *05° 32′ E*

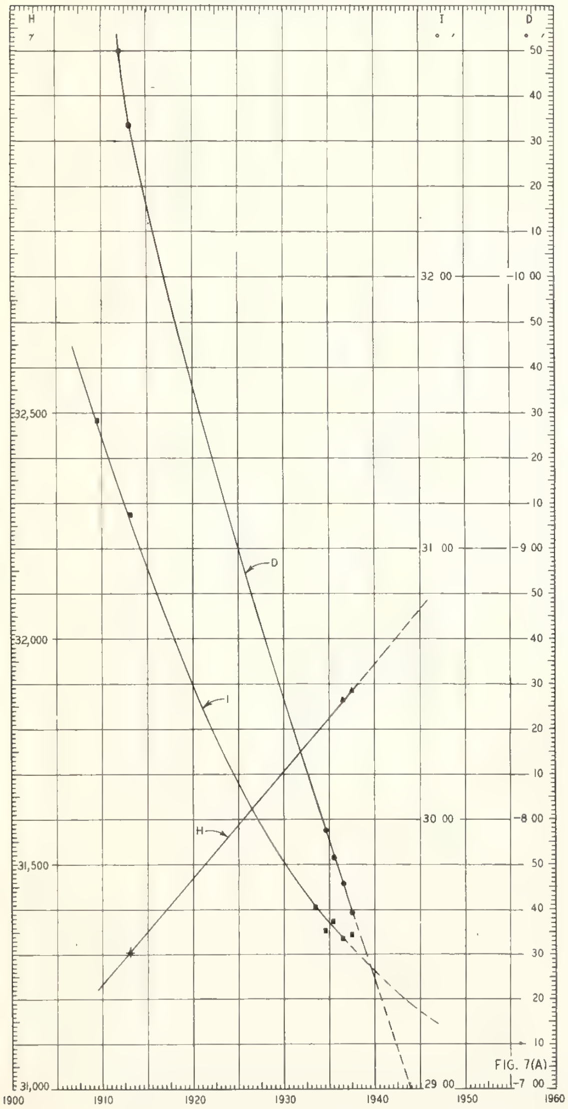


FIG. 7(A)

VALUES OF X, Y, Z, AND F

Station *TAMANRASSET* Latitude *22° 48′*

Country *FRENCH WEST AFRICA, AFRICA* Longitude *05° 32′ E*

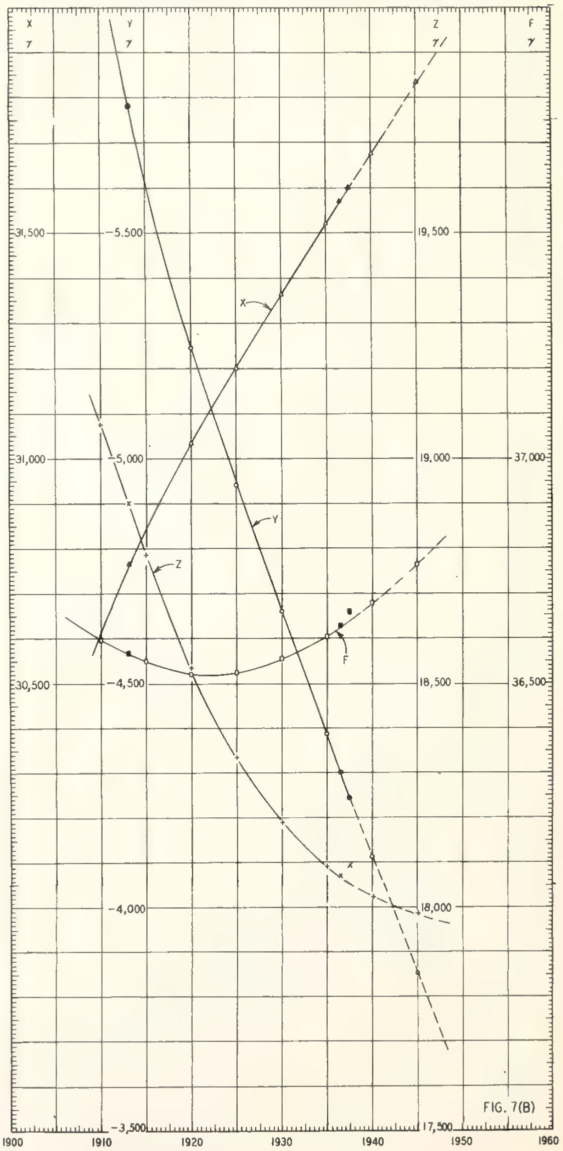


FIG. 7(B)

VALUES OF D, H, AND I

Station *MOGADISCIO* Latitude *02° 02.1'*
Country *ITALIAN SOMALILAND, AFRICA* Longitude *45° 21.2' E*

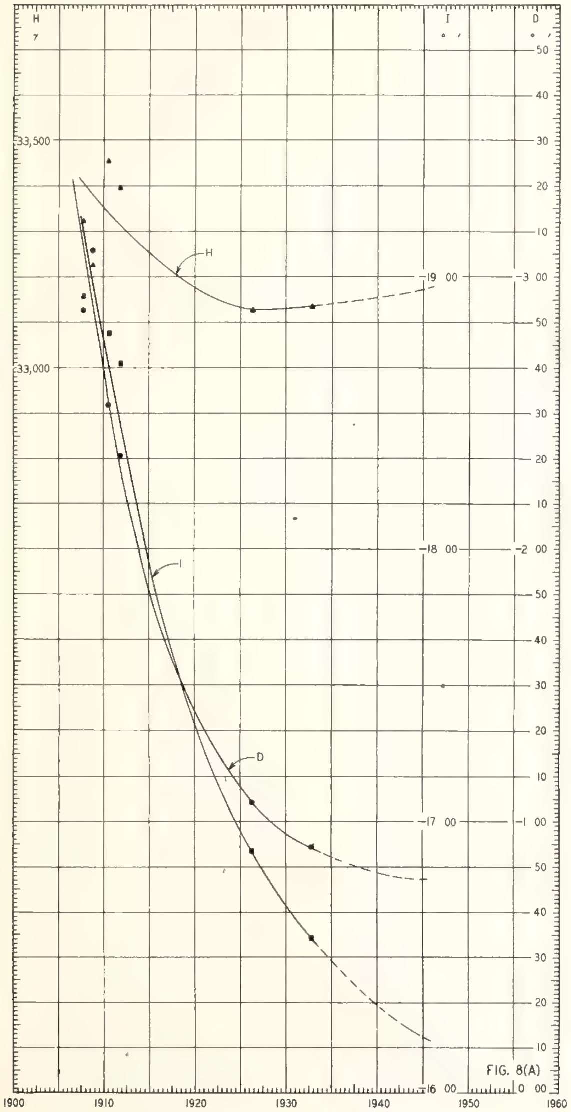


FIG. 8(A)

VALUES OF X, Y, Z, AND F

Station *MOGADISCIO* Latitude *02° 02.1'*
Country *ITALIAN SOMALILAND, AFRICA* Longitude *45° 21.2' E*

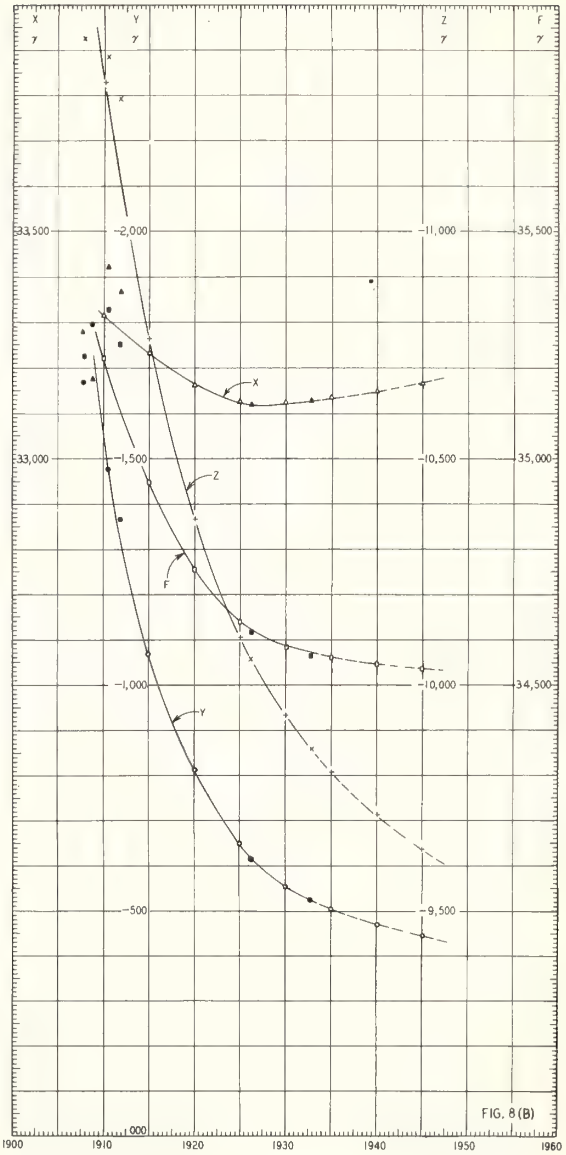


FIG. 8(B)

VALUES OF D, H, AND I

Station ELISABETHVILLE Latitude −11° 40′

Country BELGIAN CONGO, AFRICA Longitude 27° 28.2′ E

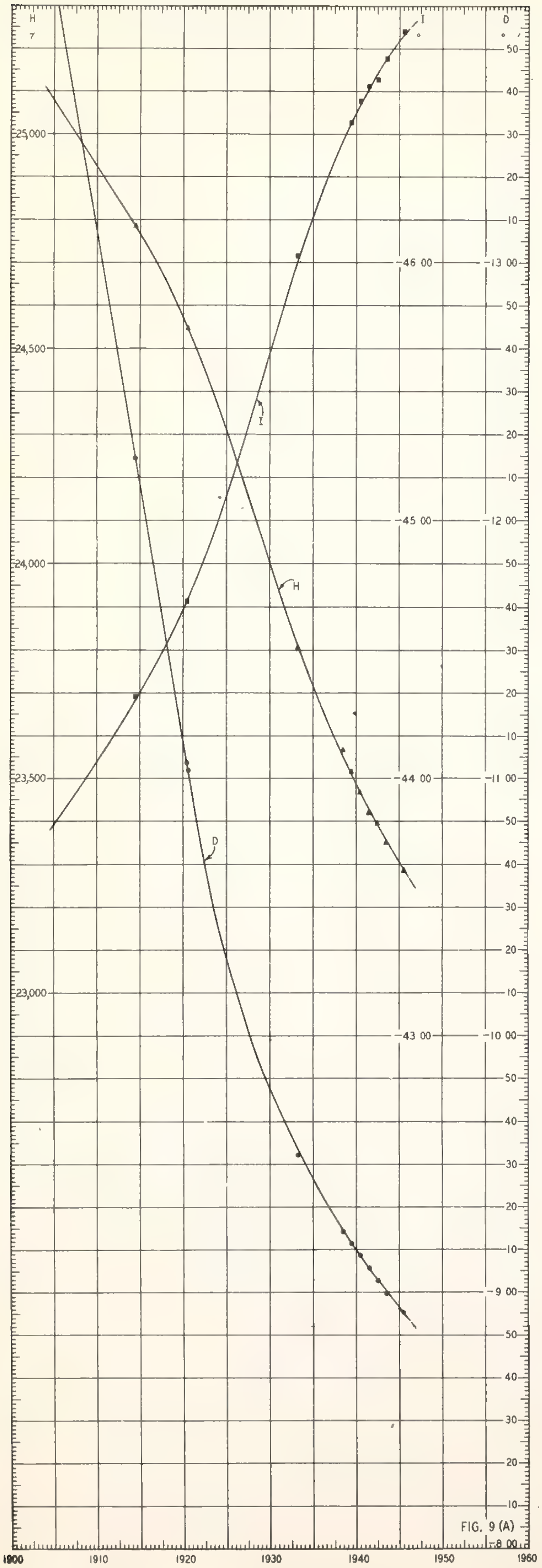


FIG. 9 (A)

VALUES OF X, Y, Z, AND F

Station ELISABETHVILLE Latitude −11° 40′

Country BELGIAN CONGO, AFRICA Longitude 27° 28.2′ E

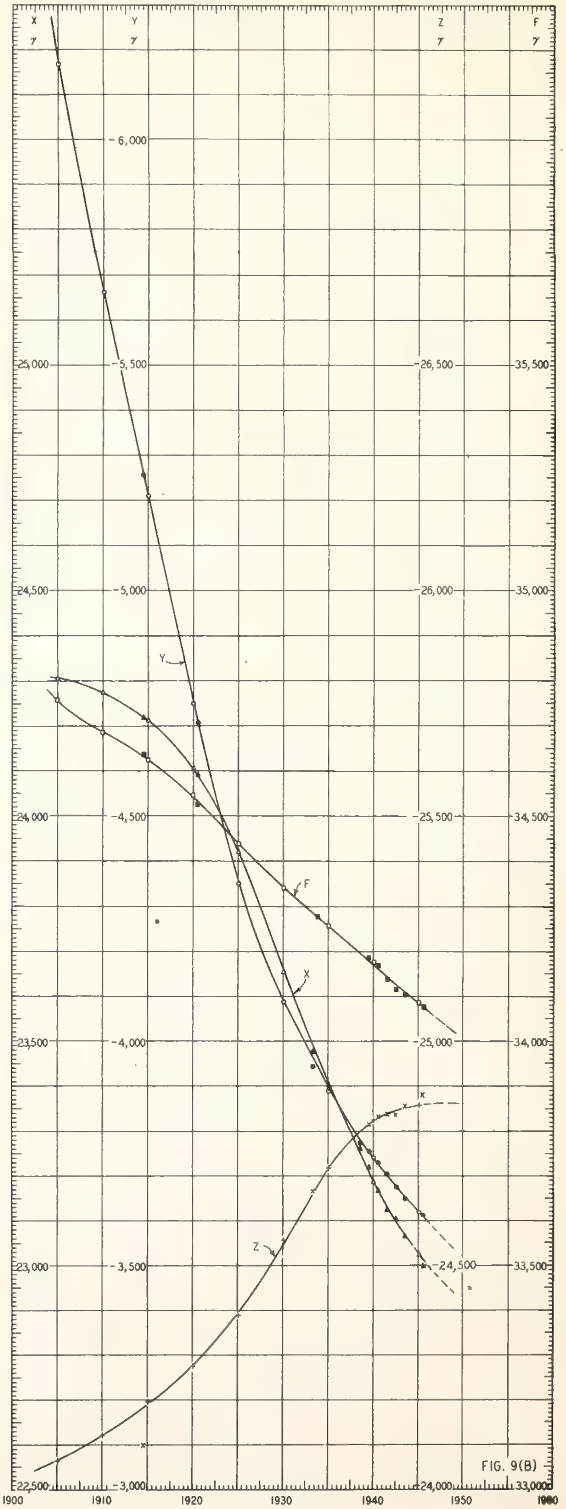


FIG. 9(B)

VALUES OF D, H, AND I

Station CAPE TOWN – HERMANUS Latitude – 33° 57.33'
Country UNION OF SOUTH AFRICA, AFRICA Longitude 18° 28.66' E

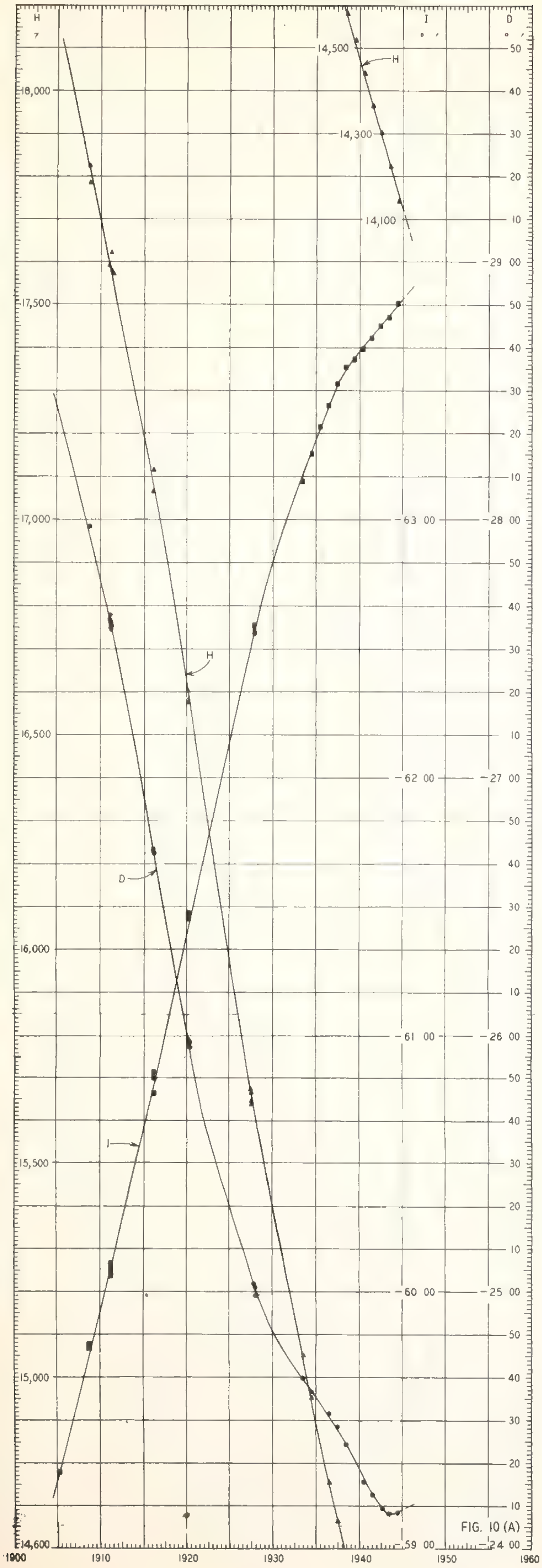


FIG. 10 (A)

VALUES OF X, Y, Z, AND F

Station CAPE TOWN – HERMANUS Latitude – 33° 57.33'
Country UNION OF SOUTH AFRICA, AFRICA Longitude 18° 28.66' E

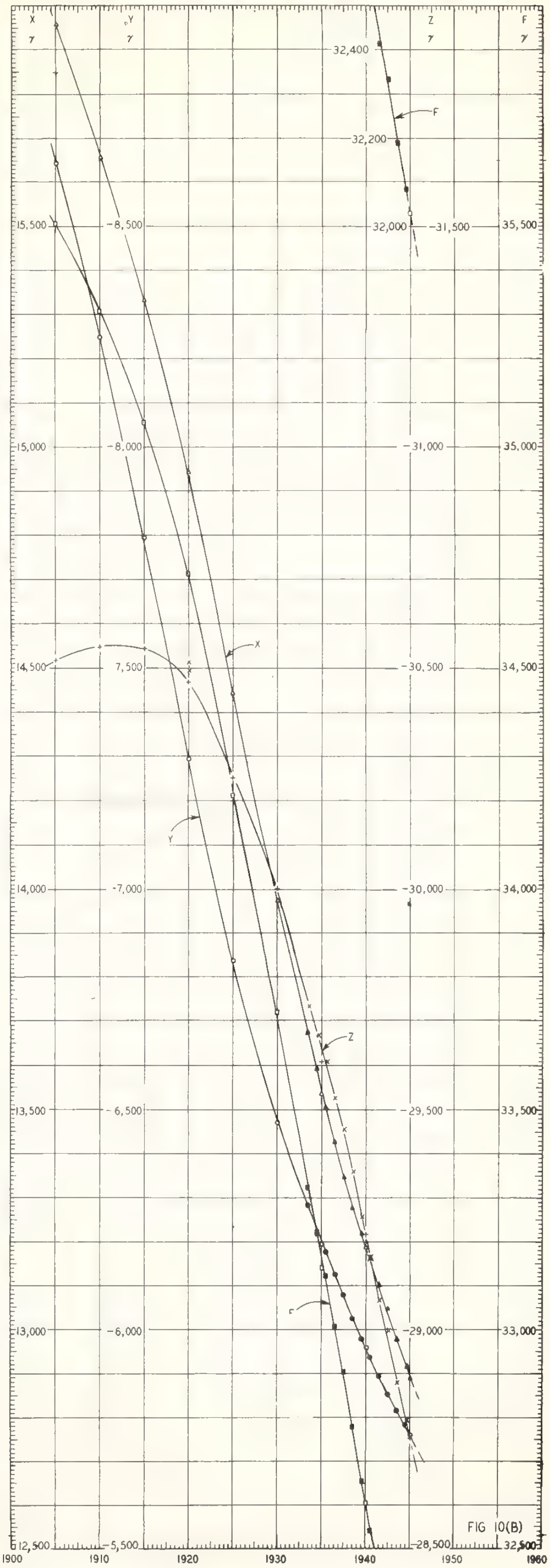


FIG 10(B)

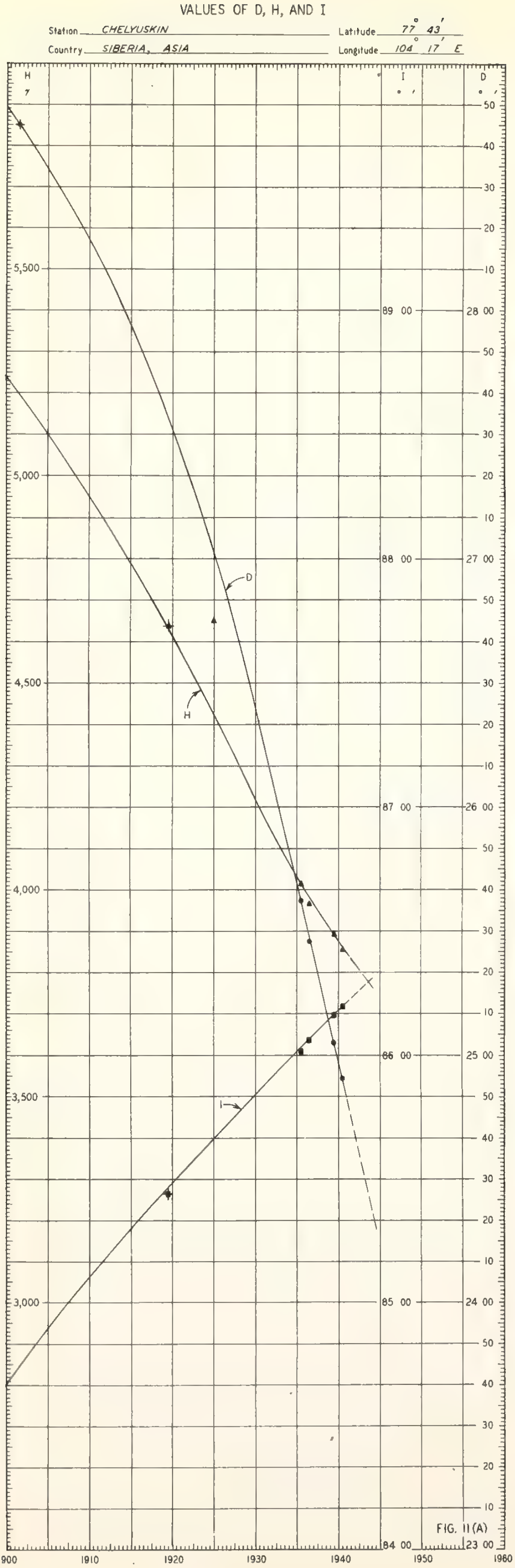


FIG. 11 (A)

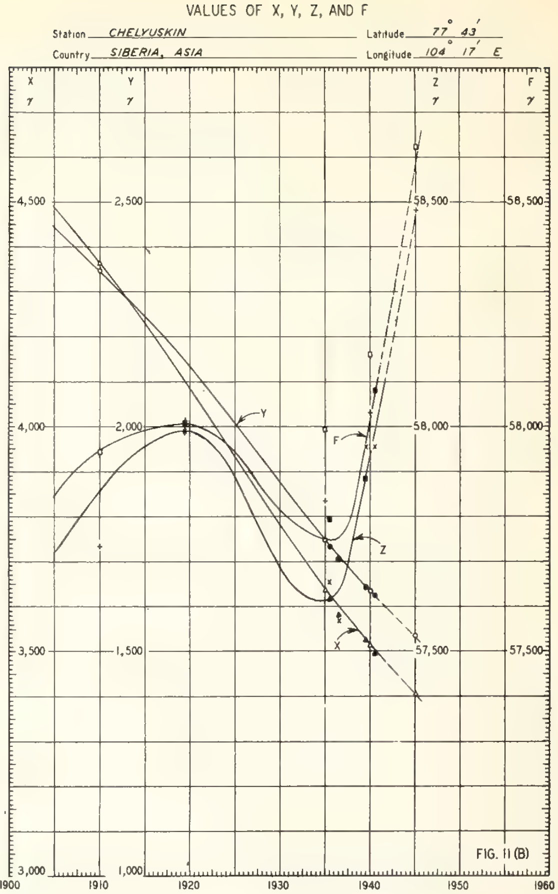


FIG. 11 (B)

VALUES OF D, H, AND I

Station DICKSON Latitude 73° 30′

Country SIBERIA, ASIA Longitude 80° 24′ E

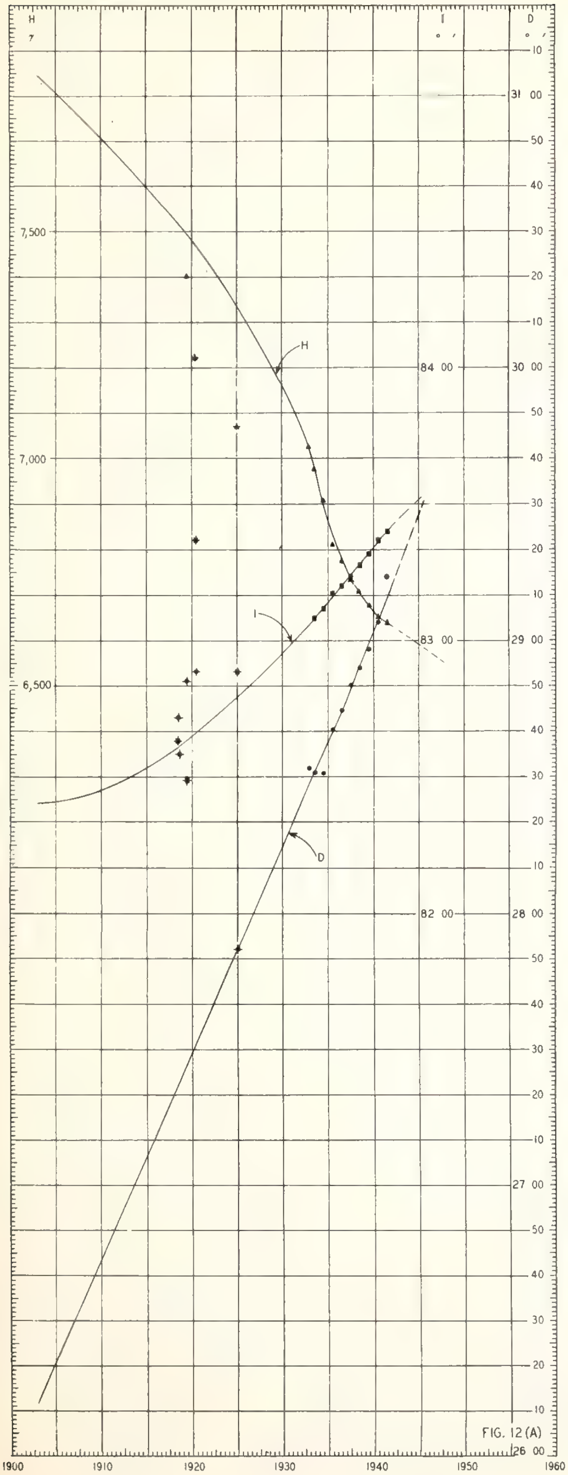


FIG. 12 (A)

VALUES OF X, Y, Z, AND F

Station DICKSON Latitude 73° 30′

Country SIBERIA, ASIA Longitude 80° 24′ E

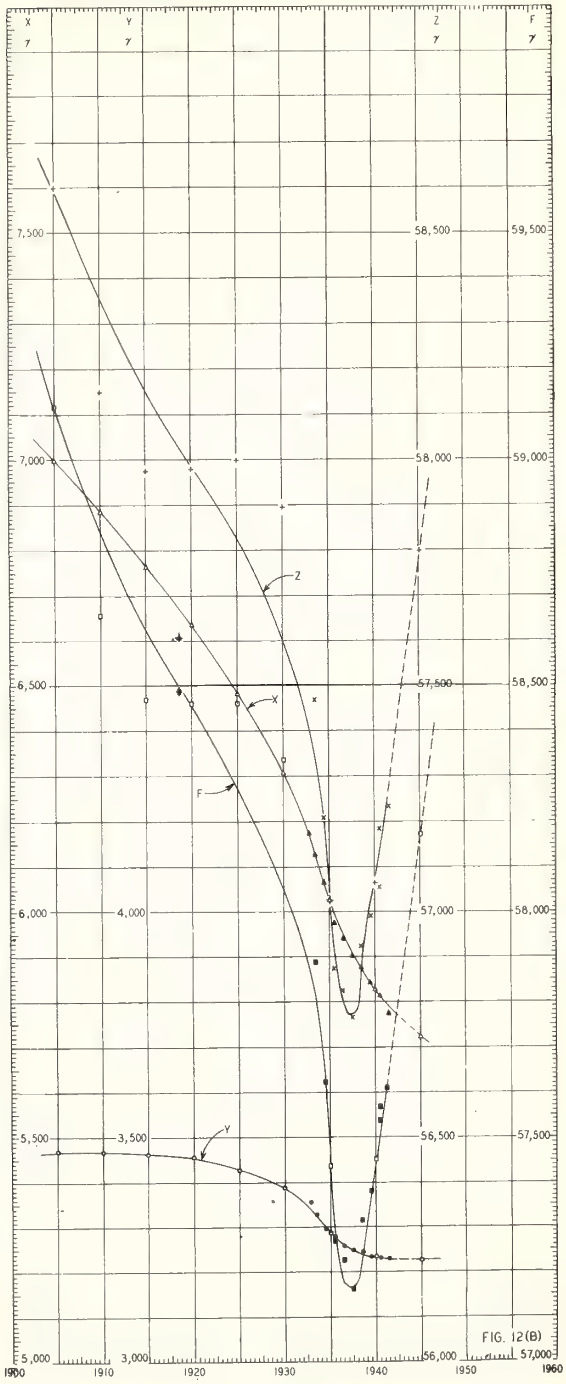


FIG. 12 (B)

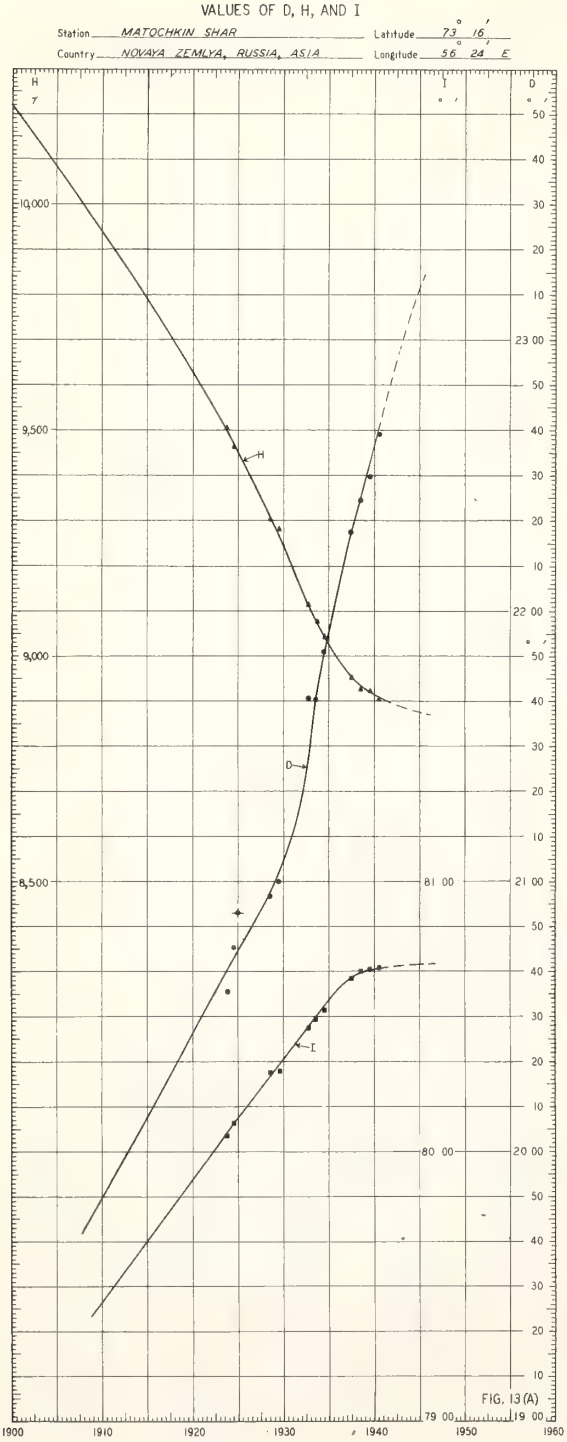


FIG. 13(A)

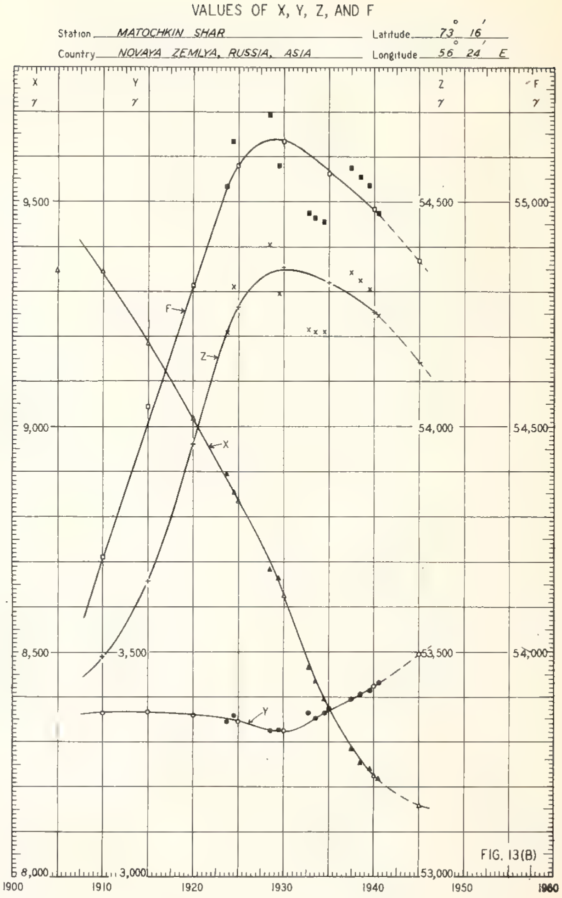


FIG. 13(B)

VALUES OF D, H, AND I

Station WELLEN Latitude 66° 10′

Country SIBERIA, ASIA Longitude 190° 09′ E

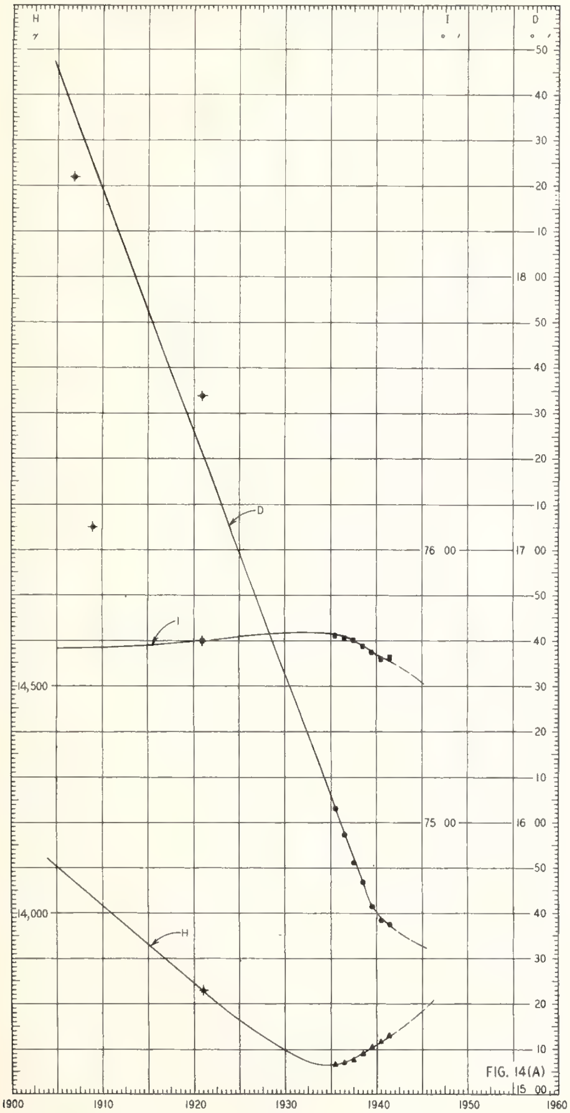


FIG. 14(A)

VALUES OF X, Y, Z, AND F

Station WELLEN Latitude 66° 10′

Country SIBERIA, ASIA Longitude 190° 09′ E

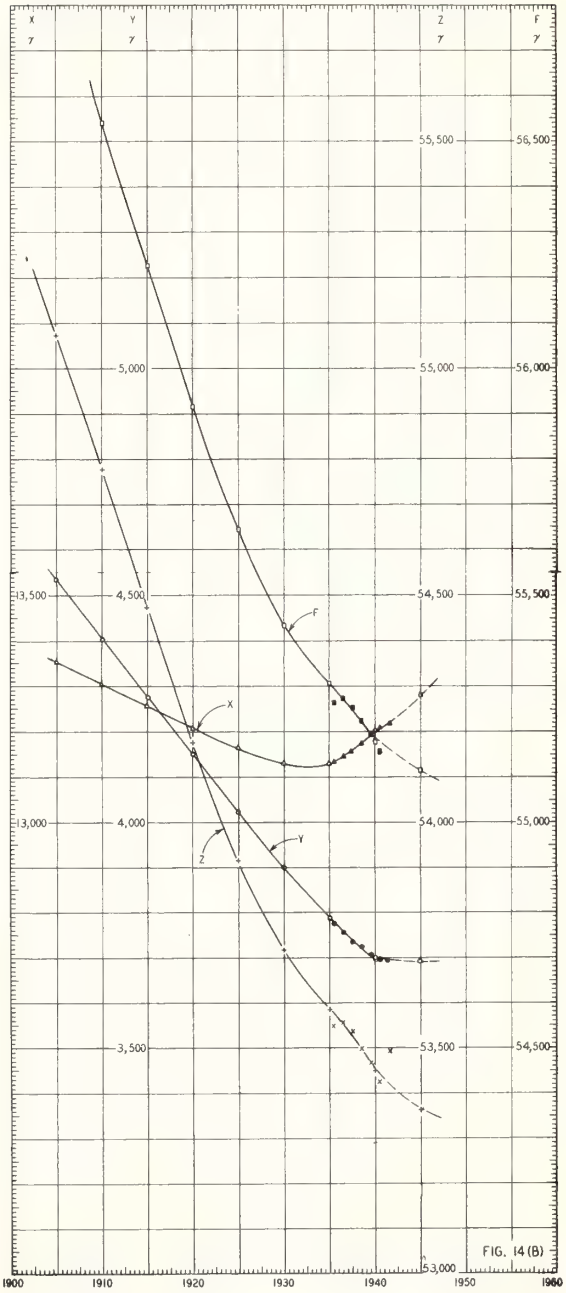


FIG. 14 (B)

VALUES OF D, H, AND I

Station *YAKUTSK* Latitude *62° 01′*
Country *SIBERIA, ASIA* Longitude *129° 43′ E*

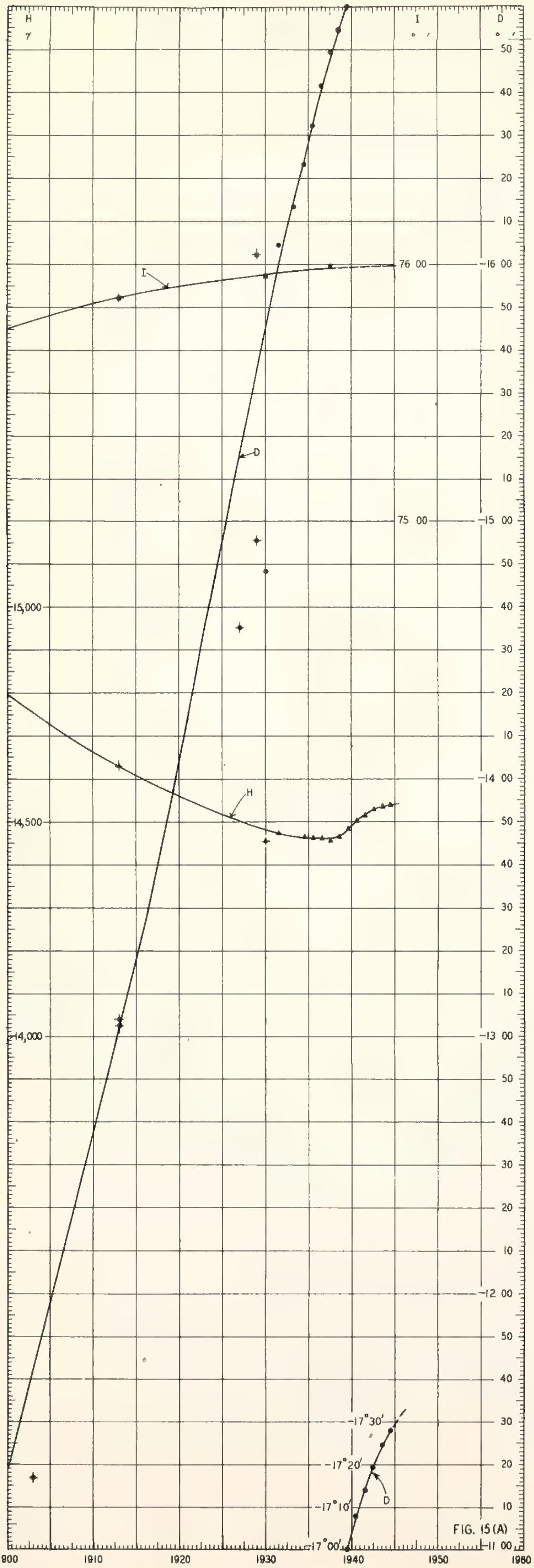


FIG. 15(A)

VALUES OF X, Y, Z, AND F

Station *YAKUTSK* Latitude *62° 01′*
Country *SIBERIA, ASIA* Longitude *129° 43′ E*

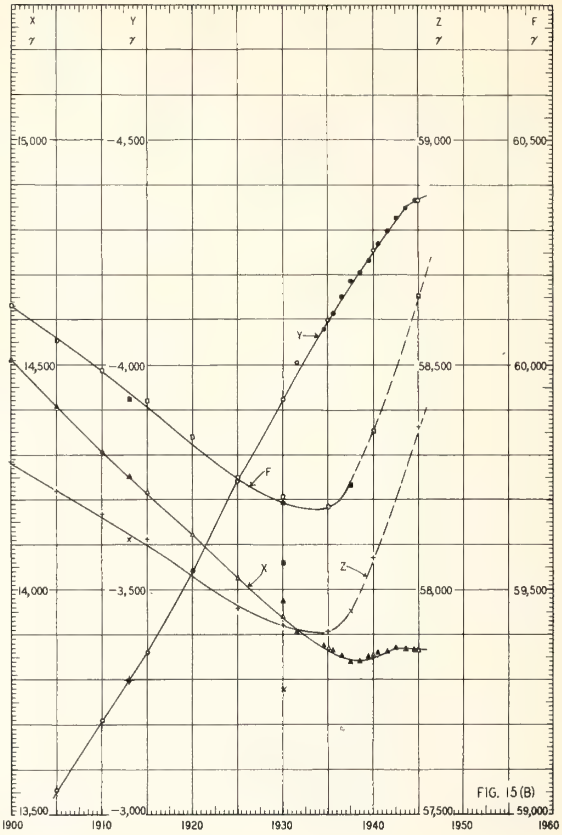


FIG. 15(B)

VALUES OF D, H, AND I

Station *ZUY – IRKUTSK* Latitude *52° 28′*
Country *RUSSIA, ASIA* Longitude *104° 02′ E*

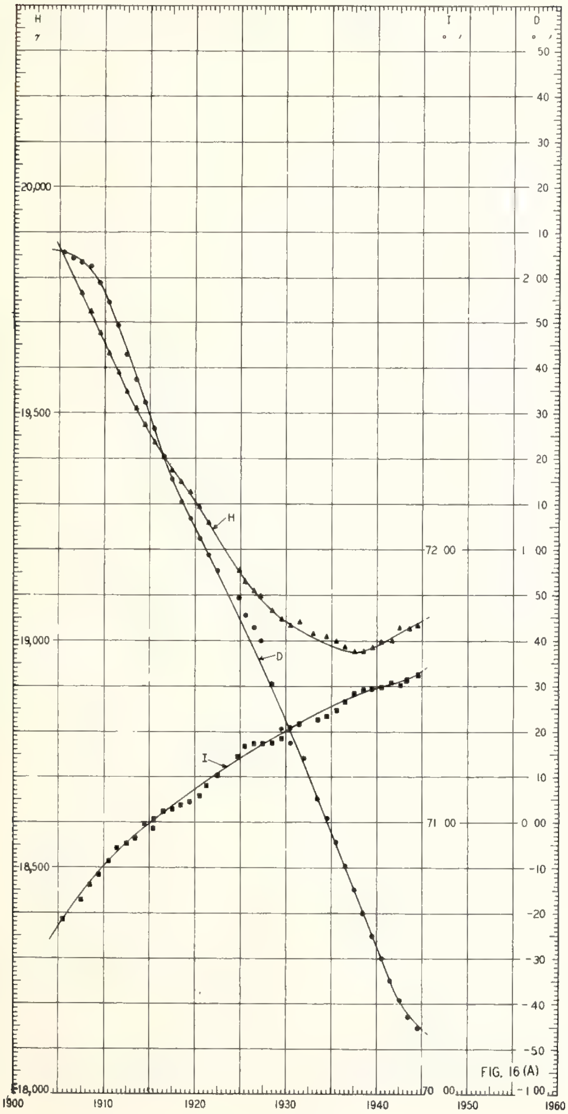


FIG. 16 (A)

VALUES OF X, Y, Z, AND F

Station *ZUY – IRKUTSK* Latitude *52° 28′*
Country *RUSSIA, ASIA* Longitude *104° 02′ E*

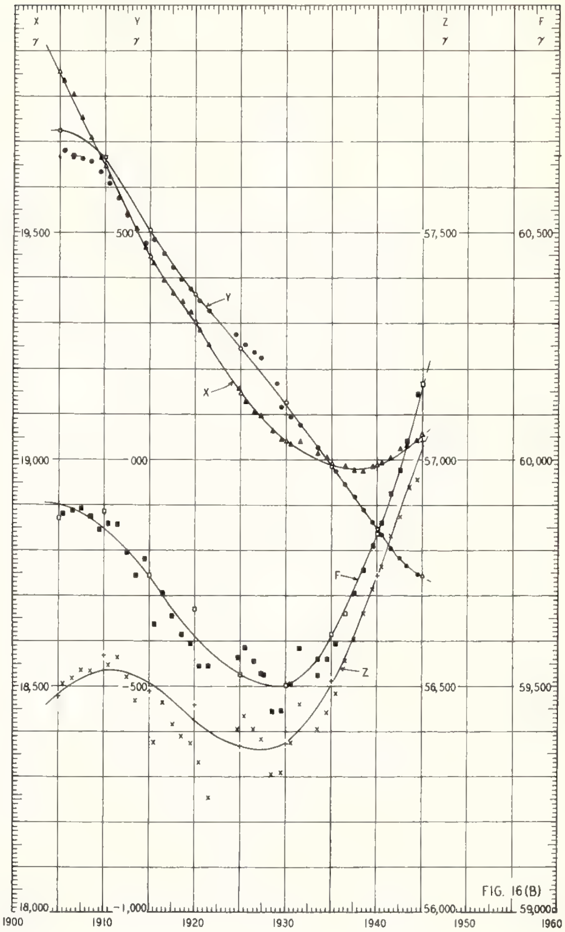


FIG. 16 (B)

VALUES OF D, H, AND I

Station *TOYOHARA* Latitude *46° 58'*

Country *JAPAN, ASIA* Longitude *142° 45' E*

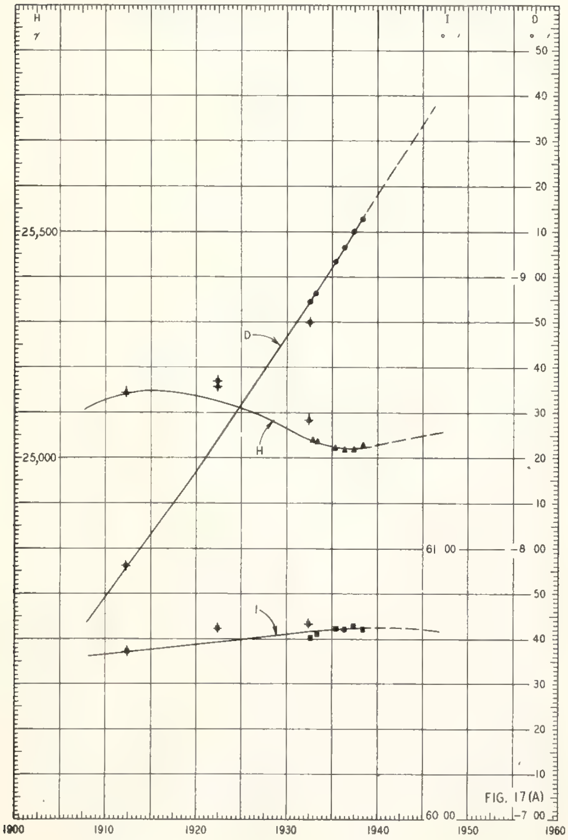


FIG. 17 (A)

VALUES OF X, Y, Z, AND F

Station *TOYOHARA* Latitude *46° 58'*

Country *JAPAN, ASIA* Longitude *142° 45' E*

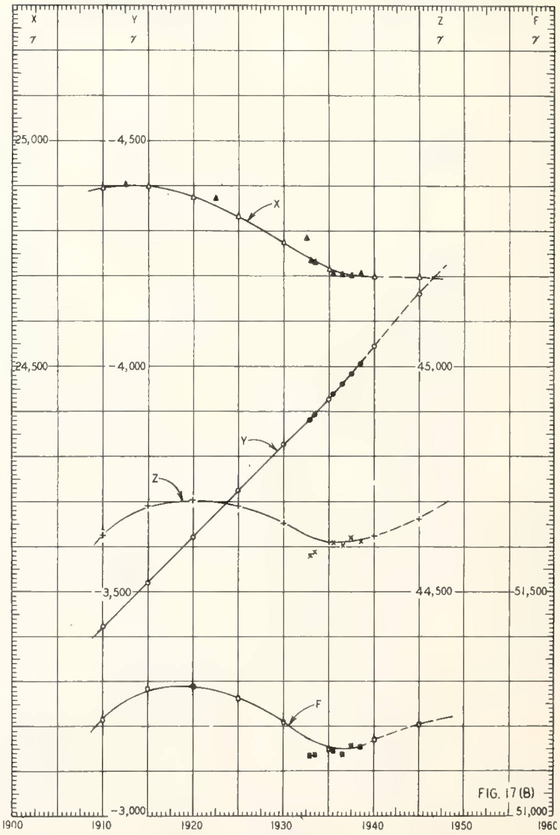


FIG. 17 (B)

VALUES OF D, H, AND I

Station OTOMARI Latitude 46° 39′

Country JAPAN, ASIA Longitude 142° 46′ E

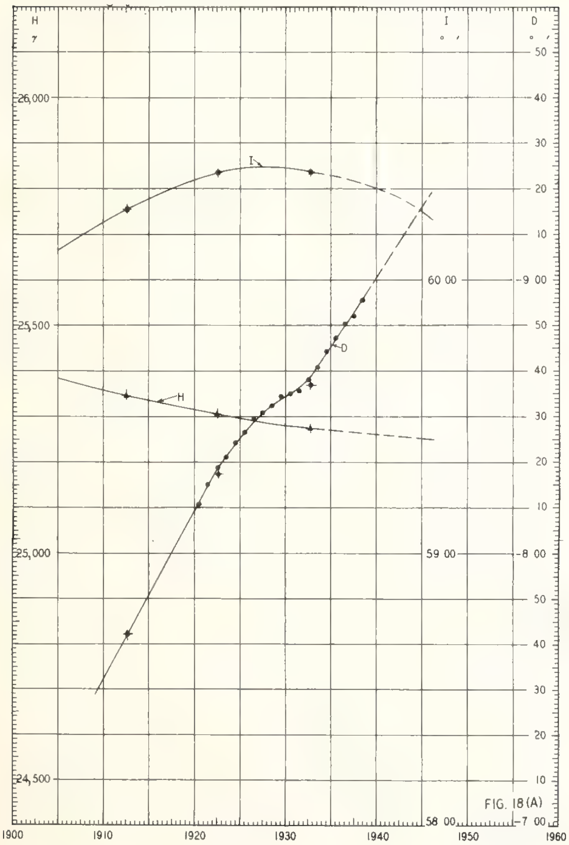


FIG. 18(A)

VALUES OF X, Y, Z, AND F

Station OTOMARI Latitude 46° 39′

Country JAPAN, ASIA Longitude 142° 46′ E

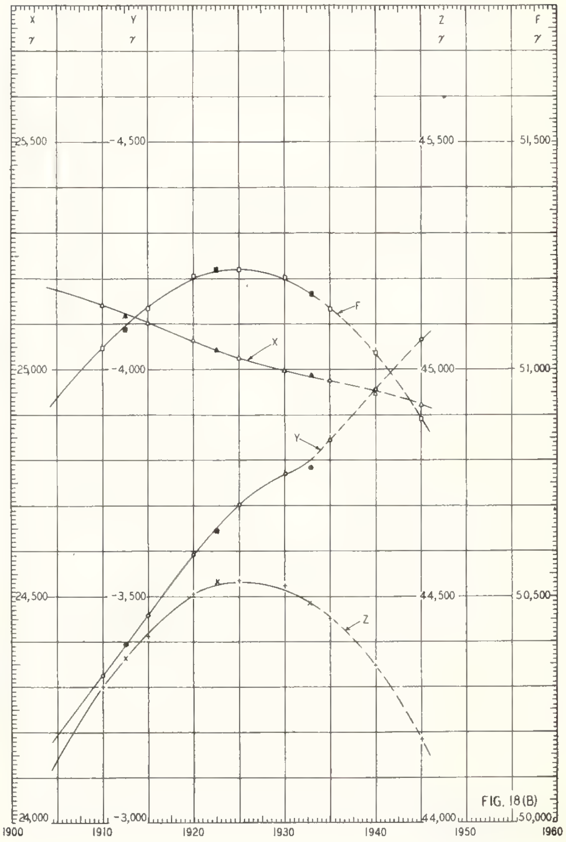


FIG. 18(B)

VALUES OF D, H, AND I

Station MAI-TUN Latitude 43° 15′

Country SIBERIA, ASIA Longitude 132° 20′ E

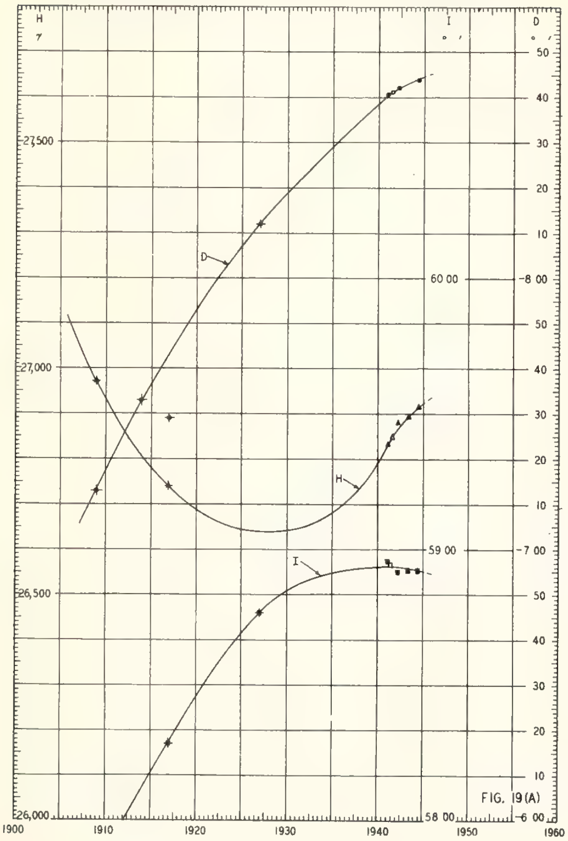


FIG. 19(A)

VALUES OF X, Y, Z, AND F

Station MAI-TUN Latitude 43° 15′

Country SIBERIA, ASIA Longitude 132° 20′ E

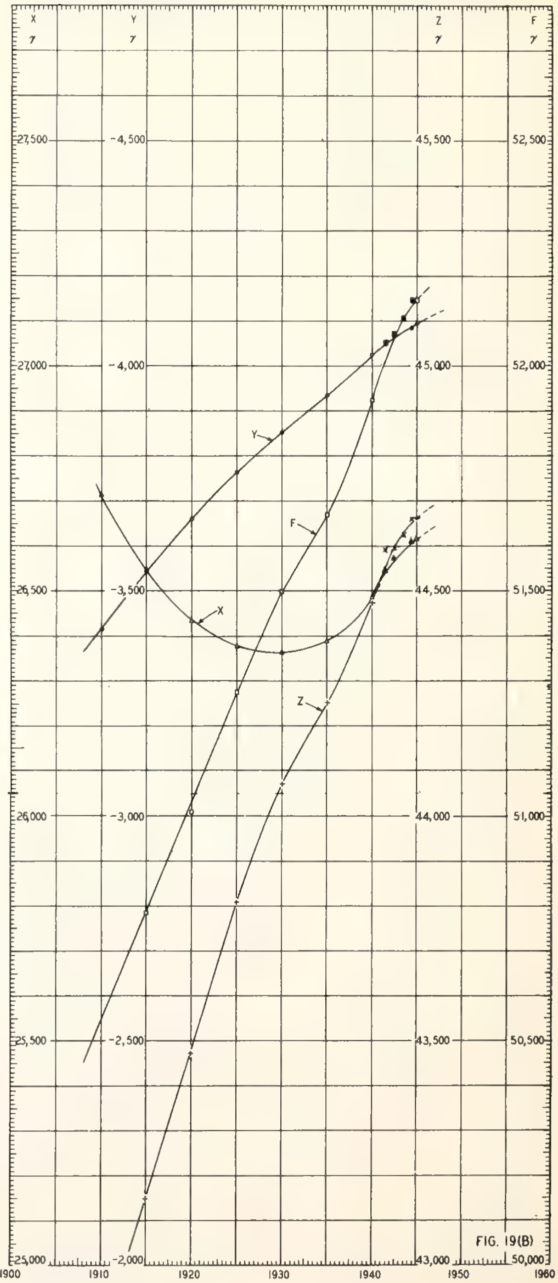


FIG. 19(B)

VALUES OF D, H, AND I

Station KELES - TASHKENT Latitude 41° 25′
Country RUSSIAN TURKESTAN, ASIA Longitude 69° 12′ E

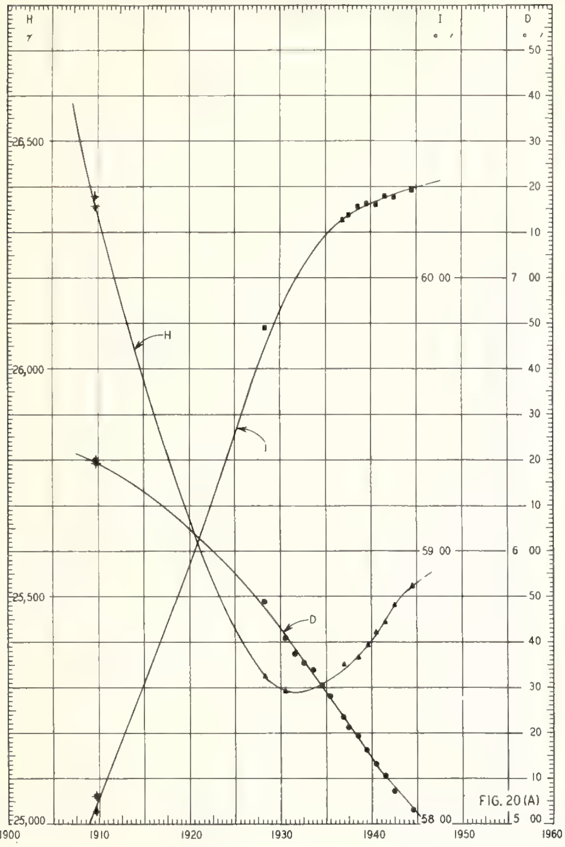


FIG. 20 (A)

VALUES OF X, Y, Z, AND F

Station KELES - TASHKENT Latitude 41° 25′
Country RUSSIAN TURKESTAN, ASIA Longitude 69° 12′ E

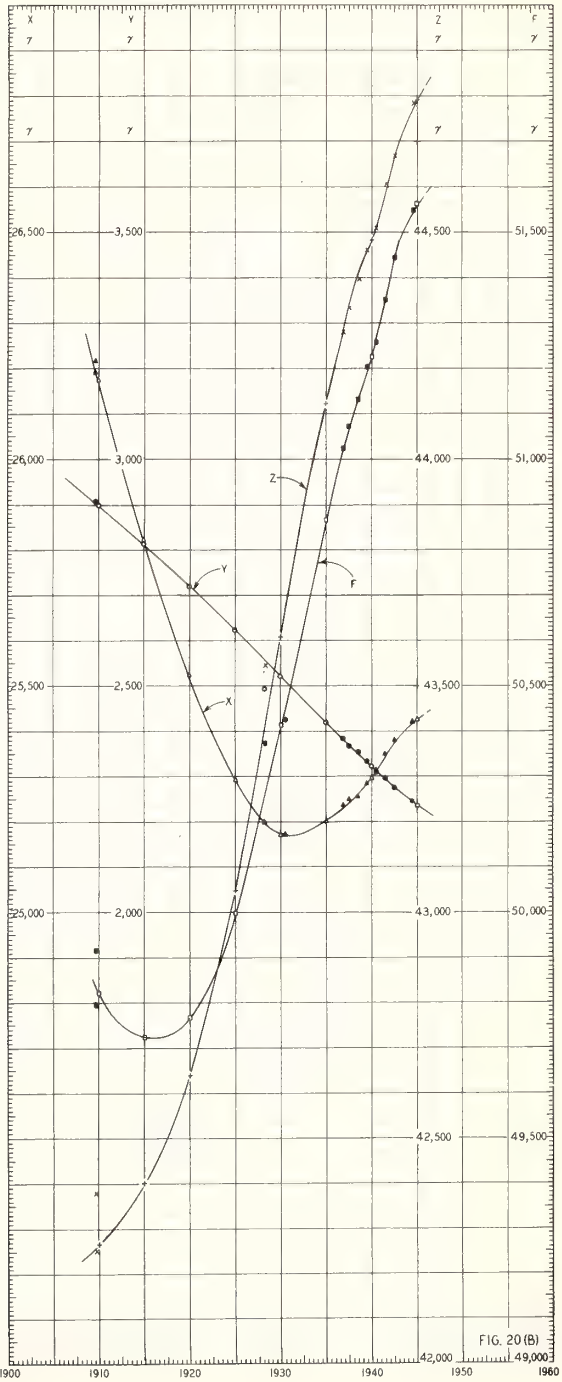


FIG. 20 (B)

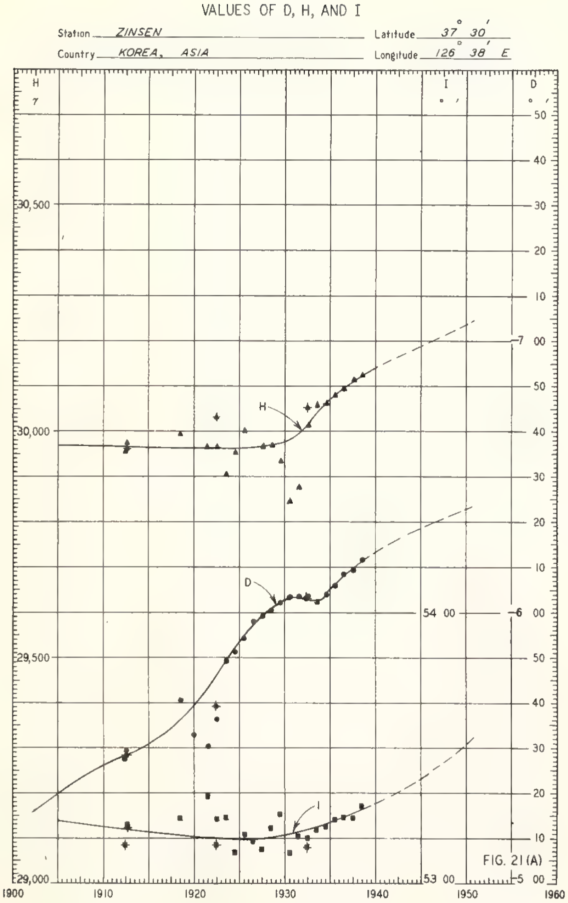


FIG. 21 (A)

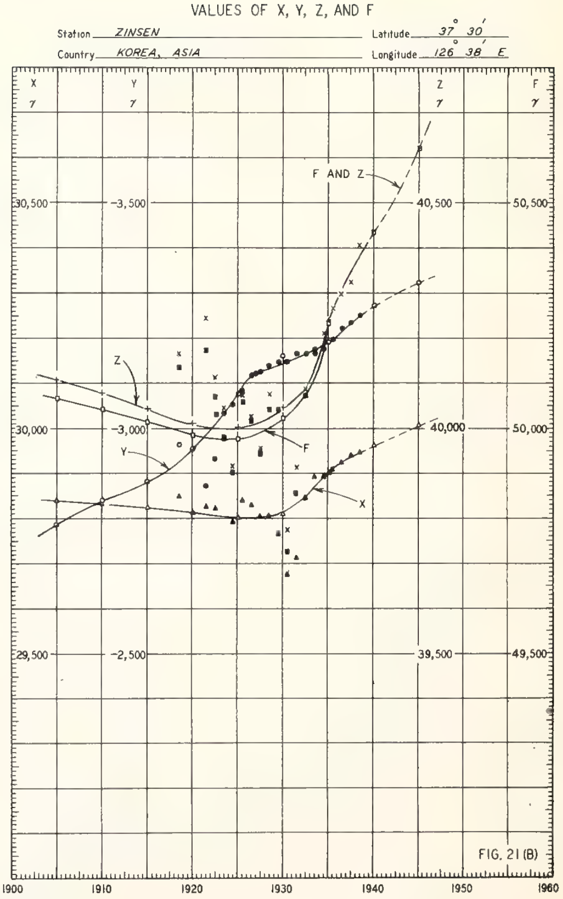


FIG. 21 (B)

VALUES OF D, H, AND I

Station KAKIOKA – TOKIO Latitude 36° 14′

Country JAPAN, ASIA Longitude 140° 11′ E

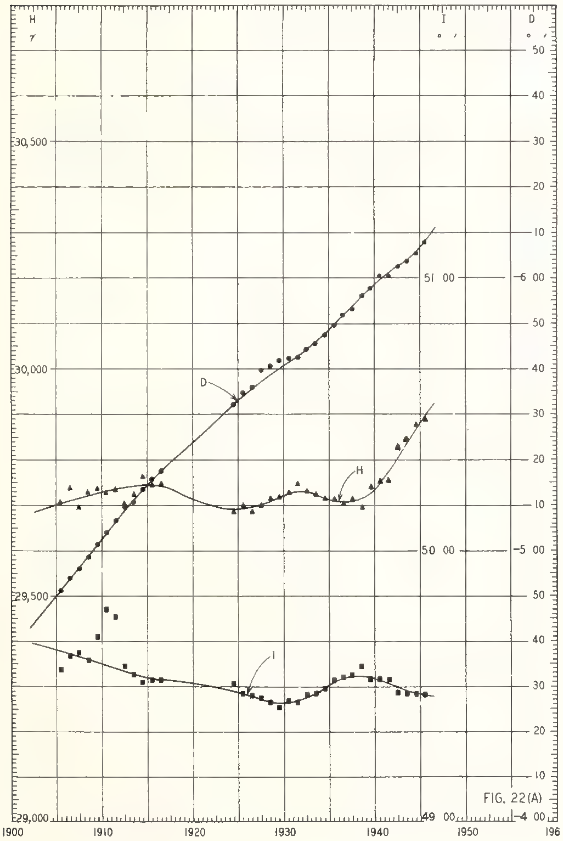


FIG. 22(A)

VALUES OF X, Y, Z, AND F

Station KAKIOKA – TOKIO Latitude 36° 14′

Country JAPAN, ASIA Longitude 140° 11′ E

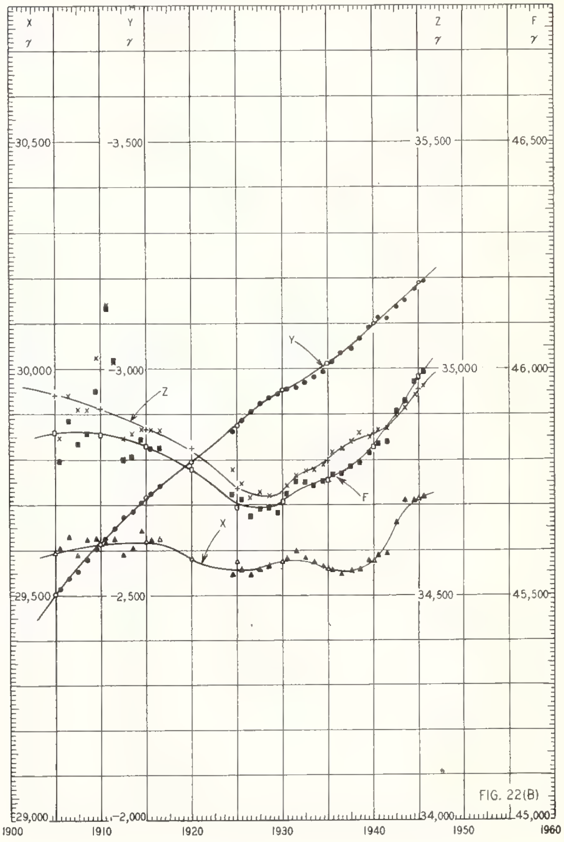


FIG. 22(B)

VALUES OF D, H, AND I

Station *TSINGTAO* Latitude *36° 04'*

Country *CHINA, ASIA* Longitude *120° 19' E*

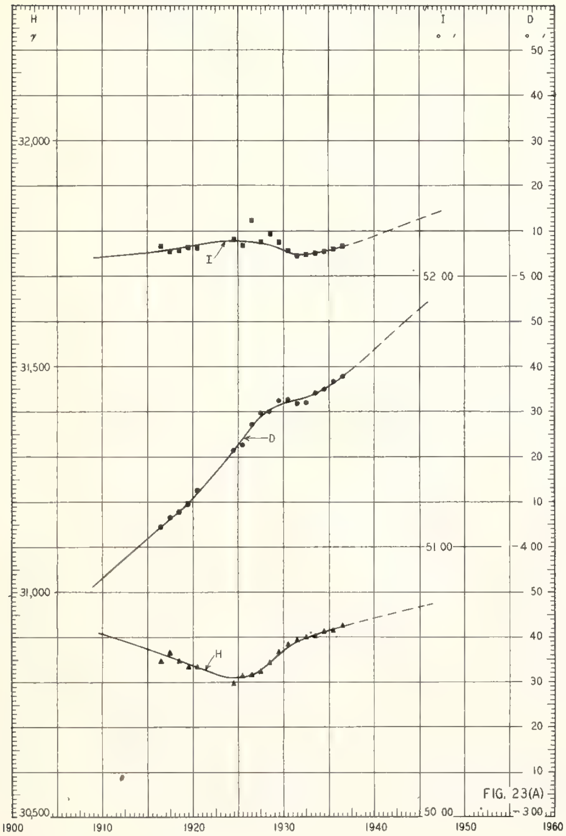


FIG. 23(A)

VALUES OF X, Y, Z, AND F

Station *TSINGTAO* Latitude *36° 04'*

Country *CHINA, ASIA* Longitude *120° 19' E*

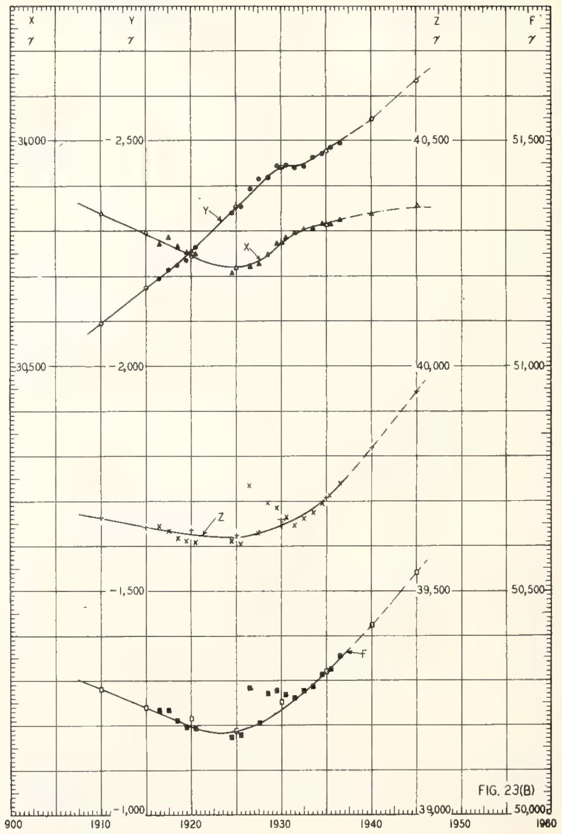


FIG. 23(B)

VALUES OF D, H, AND I

Station KSARA Latitude 33° 49'

Country SYRIA, ASIA Longitude 35° 53' E

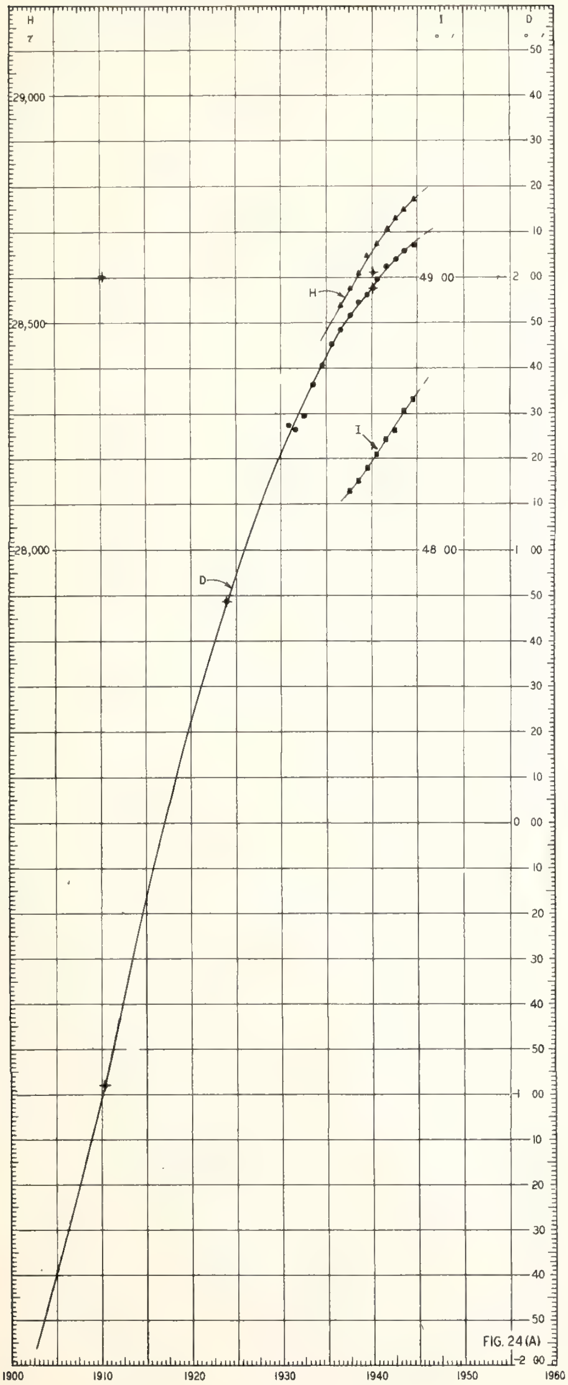


FIG. 24 (A)

VALUES OF X, Y, Z, AND F

Station KSARA Latitude 33° 49'

Country SYRIA, ASIA Longitude 35° 53' E

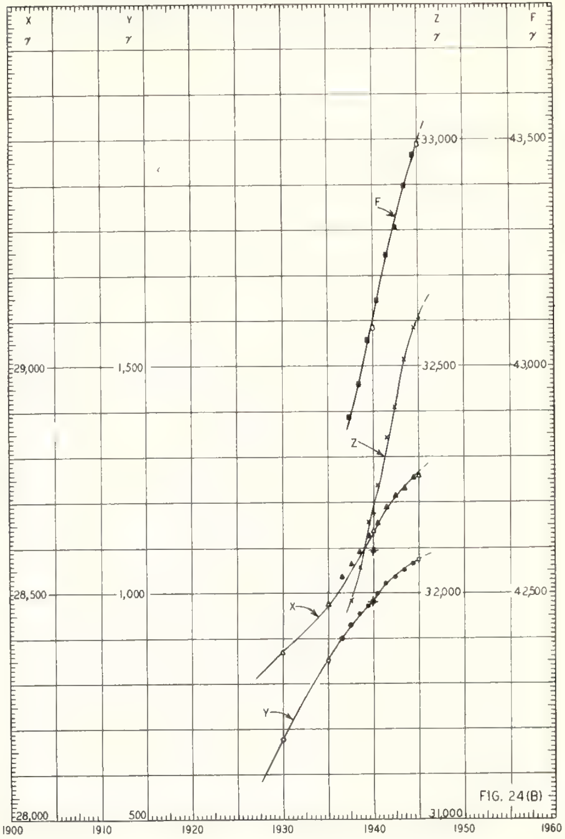


FIG. 24 (B)

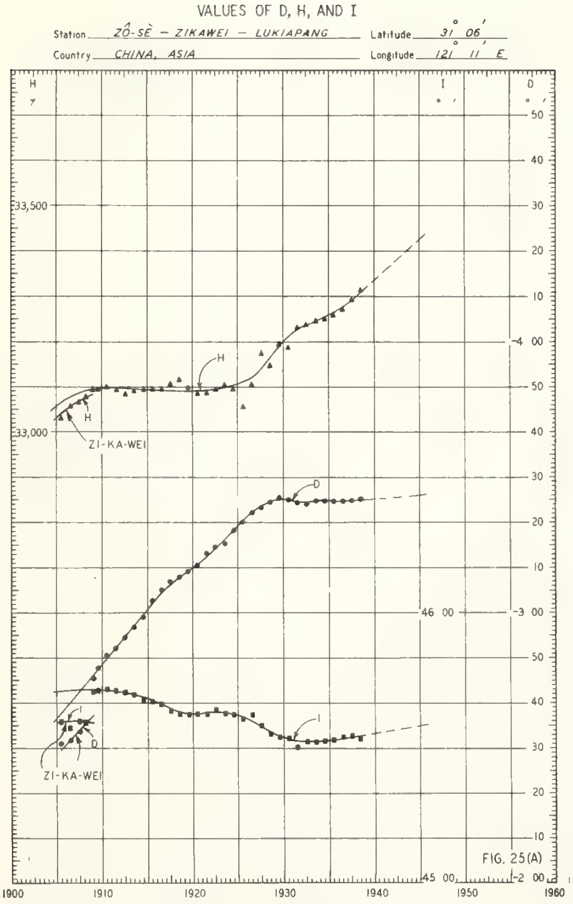


FIG. 25(A)

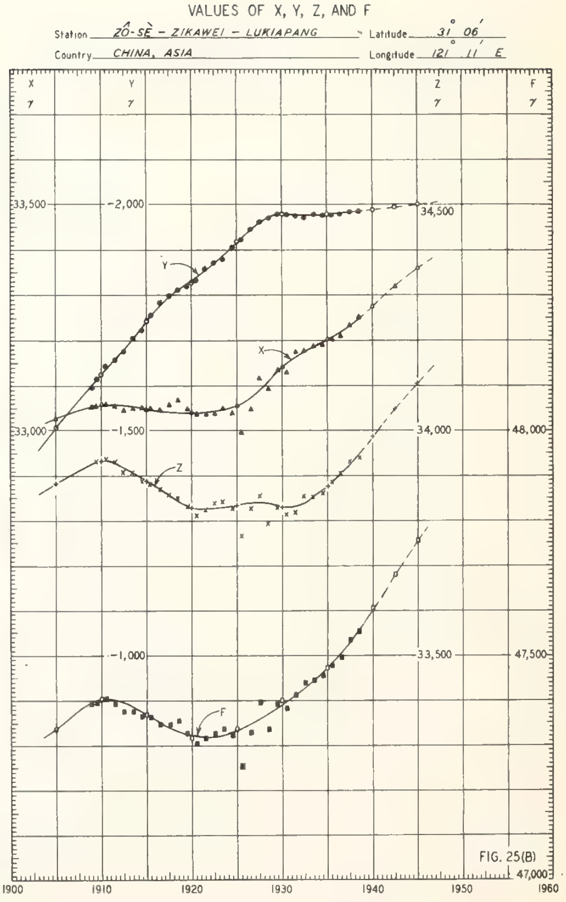


FIG. 25(B)

VALUES OF D, H, AND I

Station *DEHRA DUN* Latitude *30° 19′*
Country *INDIA, ASIA* Longitude *78° 03′ E*

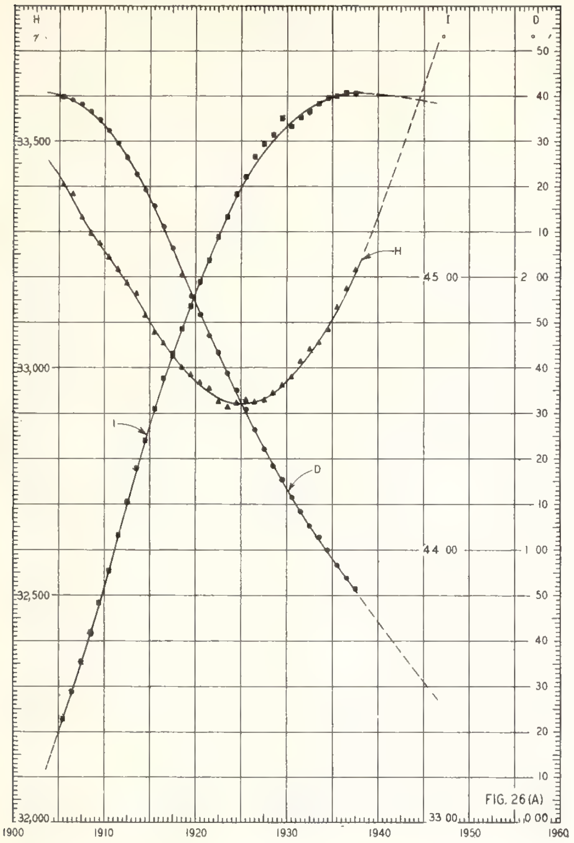


FIG. 26(A)

VALUES OF X, Y, Z, AND F

Station *DEHRA DUN* Latitude *30° 19′*
Country *INDIA, ASIA* Longitude *78° 03′ E*

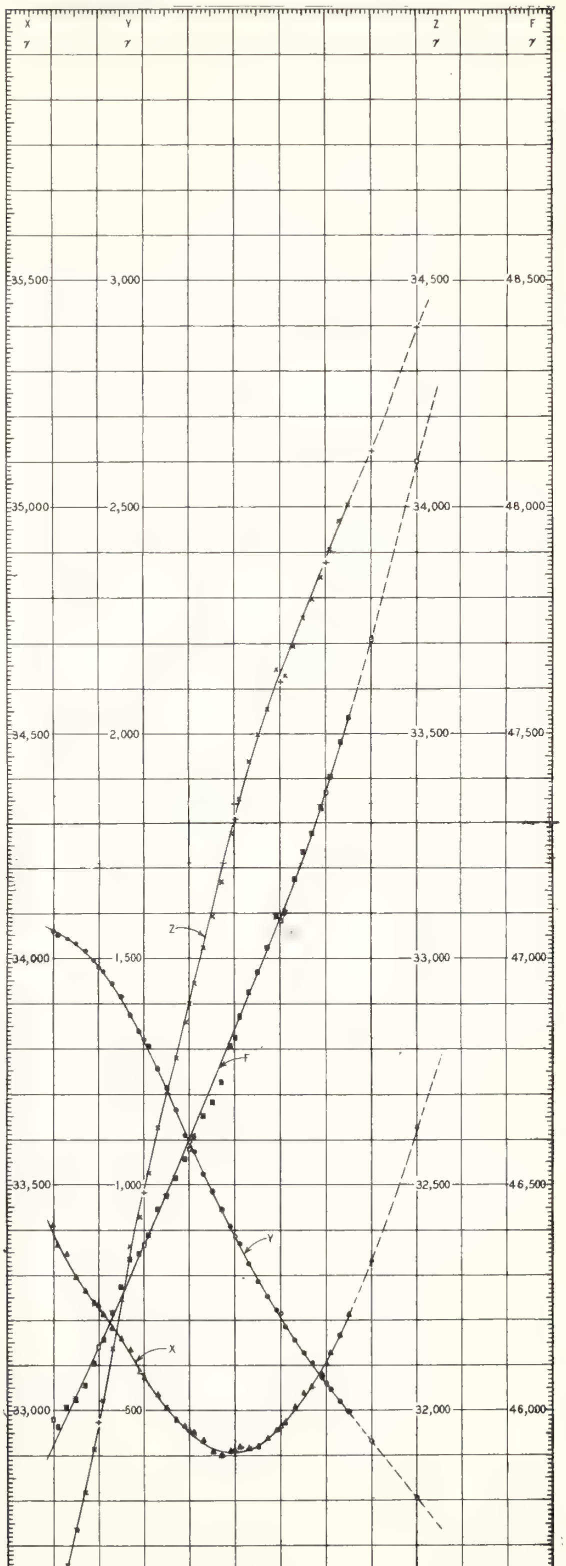


FIG. 26(B)

VALUES OF D, H, AND I

Station *BARRACKPORE* Latitude *22° 46′*
Country *BENGAL, INDIA, ASIA* Longitude *88° 22′ E*

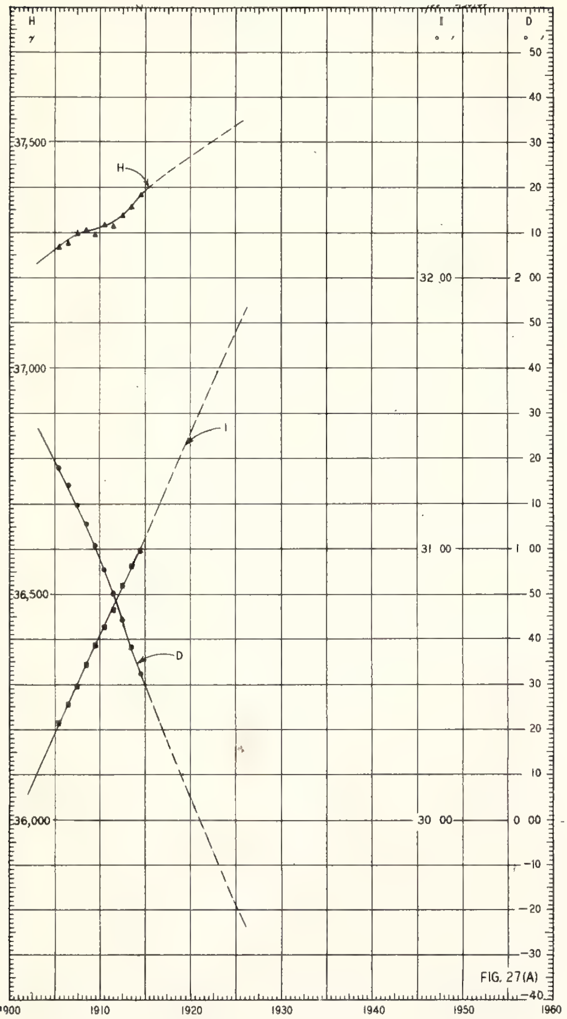


FIG. 27(A)

VALUES OF X, Y, Z, AND F

Station *BARRACKPORE* Latitude *22° 46′*
Country *BENGAL, INDIA, ASIA* Longitude *88° 22′ E*

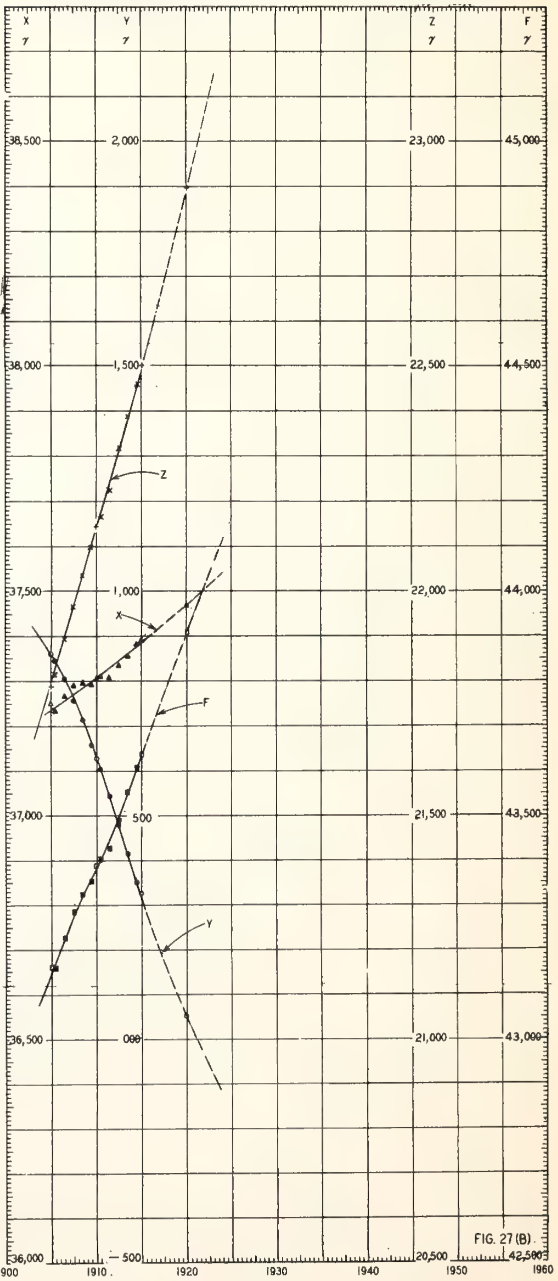


FIG. 27 (B)

VALUES OF D, H, AND I

Station HONGKONG – AU TAU Latitude 22° 18′

Country CHINA, ASIA Longitude 114° 10′ E

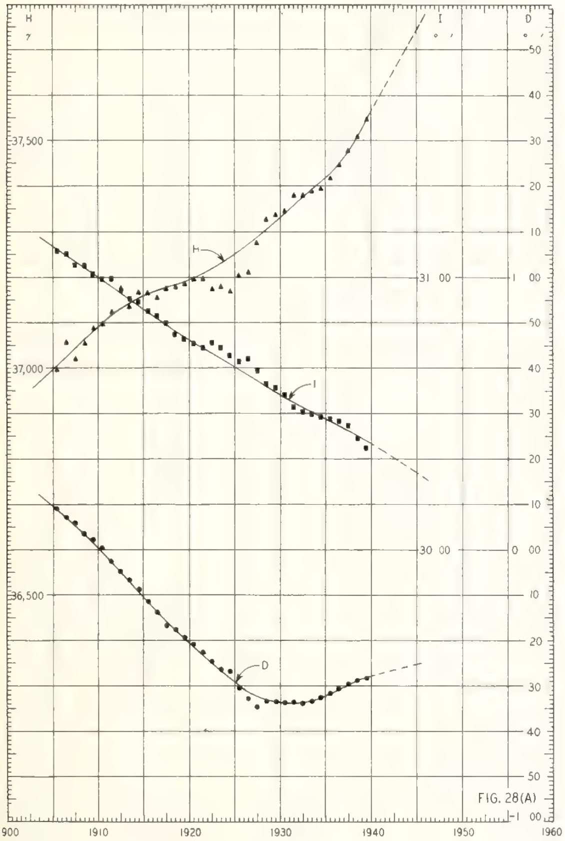


FIG. 28(A)

VALUES OF X, Y, Z, AND F

Station HONGKONG – AU TAU Latitude 22° 18′

Country CHINA, ASIA Longitude 114° 10′ E

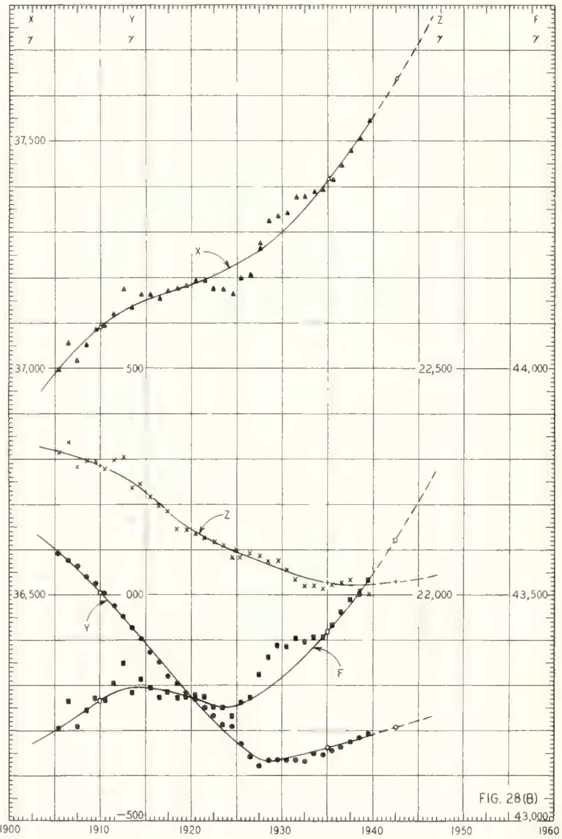


FIG. 28(B)

VALUES OF D, H, AND I

Station TOUNGOO Latitude 18° 56′
Country BURMA, ASIA Longitude 96° 27′

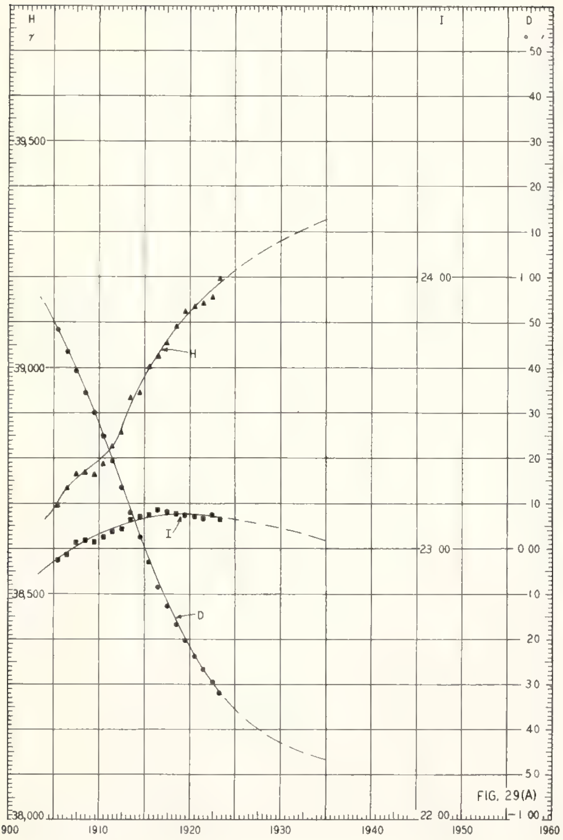


FIG. 29(A)

VALUES OF X, Y, Z, AND F

Station TOUNGOO Latitude 18° 56′
Country BURMA, ASIA Longitude 96° 27′

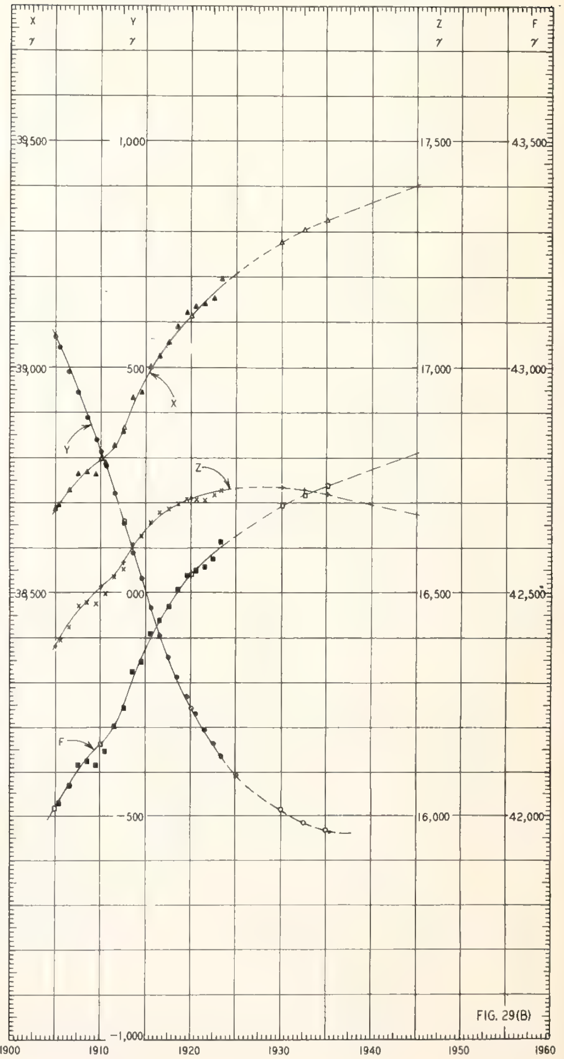


FIG. 29(B)

VALUES OF D, H, AND I

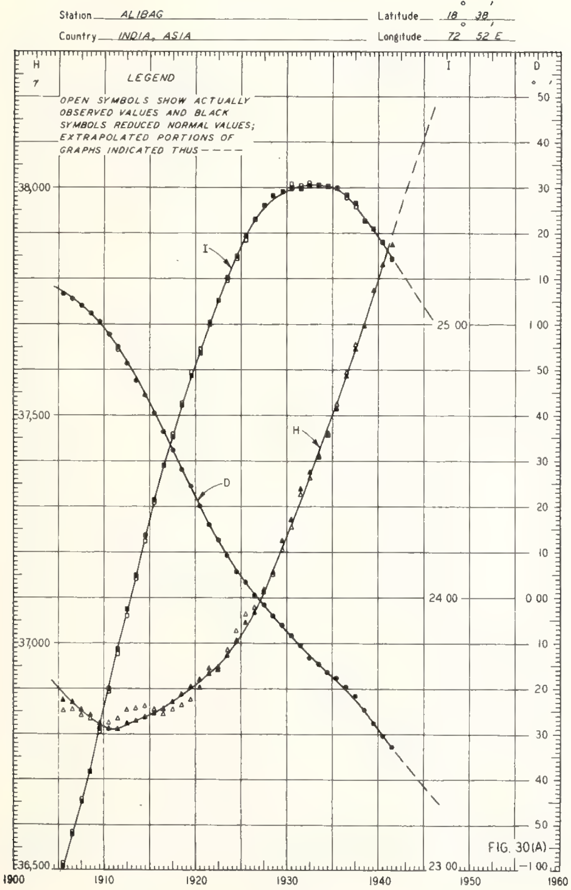


FIG. 30(A)

VALUES OF X, Y, Z, AND F

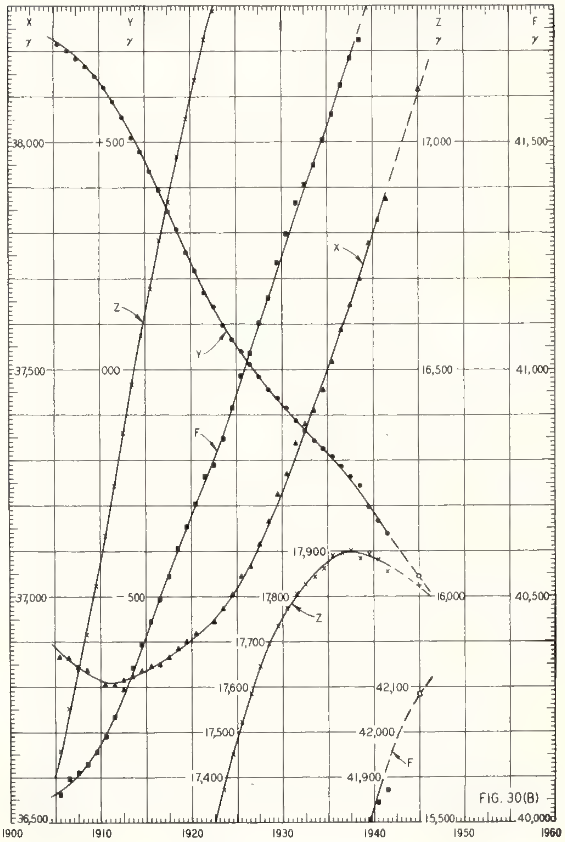


FIG. 30(B)

VALUES OF D, H, AND I

Station *KODAIKÁNAL* Latitude *10° 14′*
Country *INDIA, ASIA* Longitude *77° 28′ E*

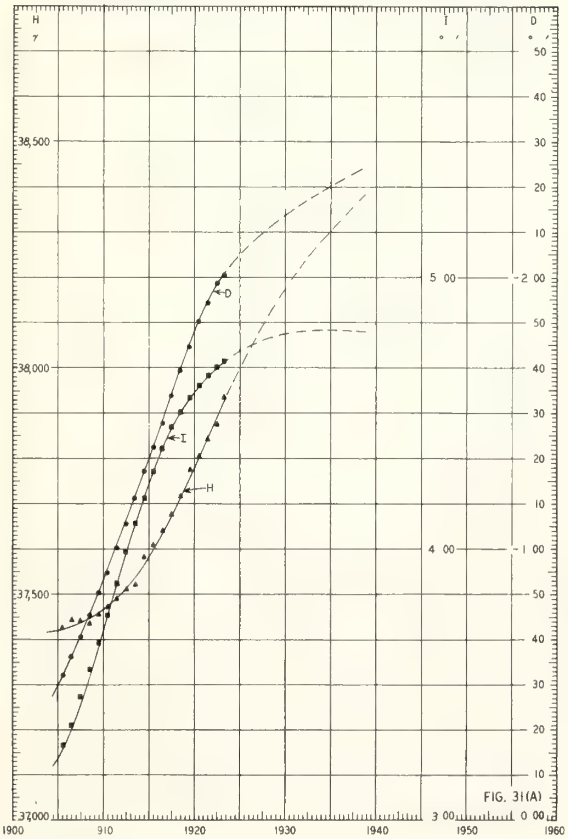


FIG. 31(A)

VALUES OF X, Y, Z, AND F

Station *KODAIKÁNAL* Latitude *10° 14′*
Country *INDIA, ASIA* Longitude *77° 28′ E*

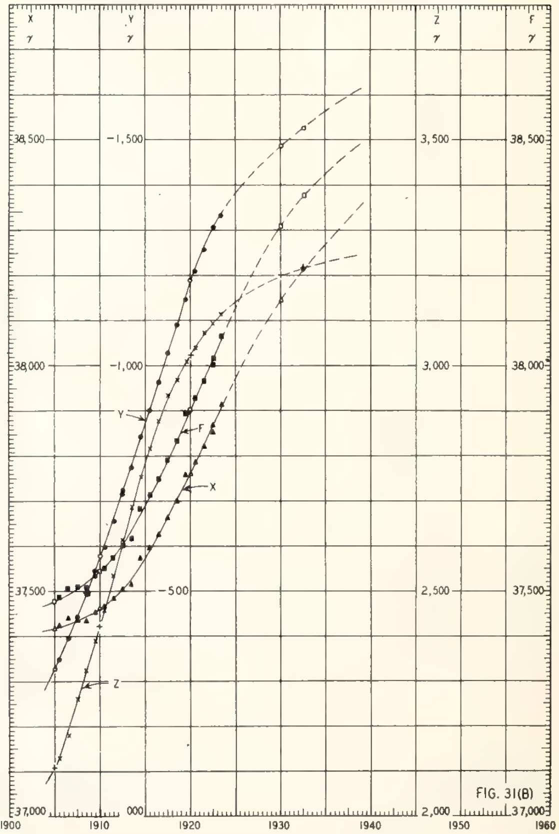


FIG. 31(B)

VALUES OF D, H, AND I

Station WATHEROO Latitude -30° 19′

Country AUSTRALIA Longitude 115° 52′ E

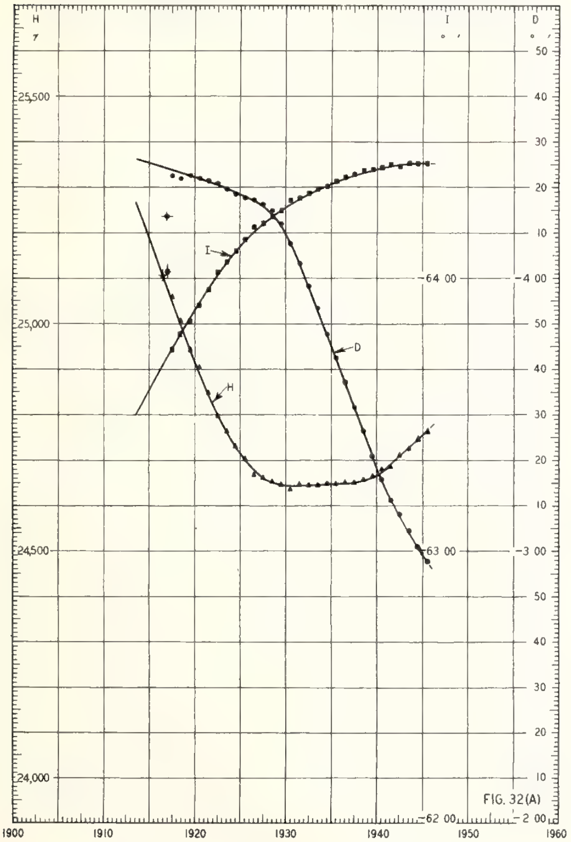


FIG. 32(A)

VALUES OF X, Y, Z, AND F

Station WATHEROO Latitude -30° 19′

Country AUSTRALIA Longitude 115° 52′ E

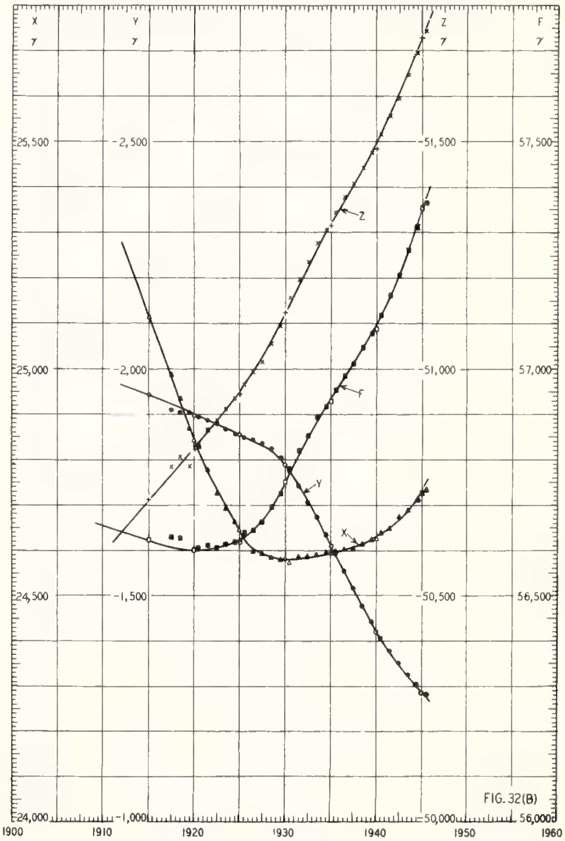


FIG. 32(B)

VALUES OF D, H, AND I

Station TOOLANGI - MELBOURNE Latitude -37° 32'

Country VICTORIA, AUSTRALIA Longitude 145° 28' E

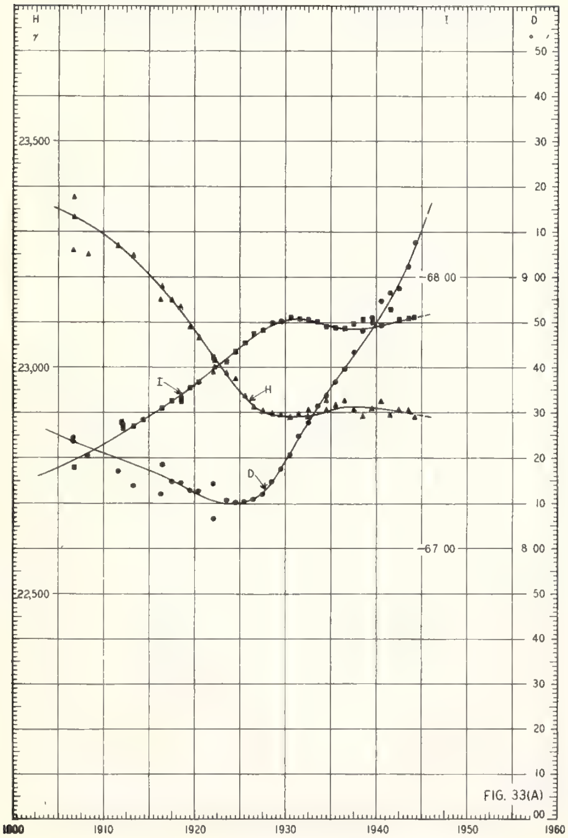


FIG. 33(A)

VALUES OF X, Y, Z, AND F

Station TOOLANGI - MELBOURNE Latitude -37° 32'

Country VICTORIA, AUSTRALIA Longitude 145° 28' E

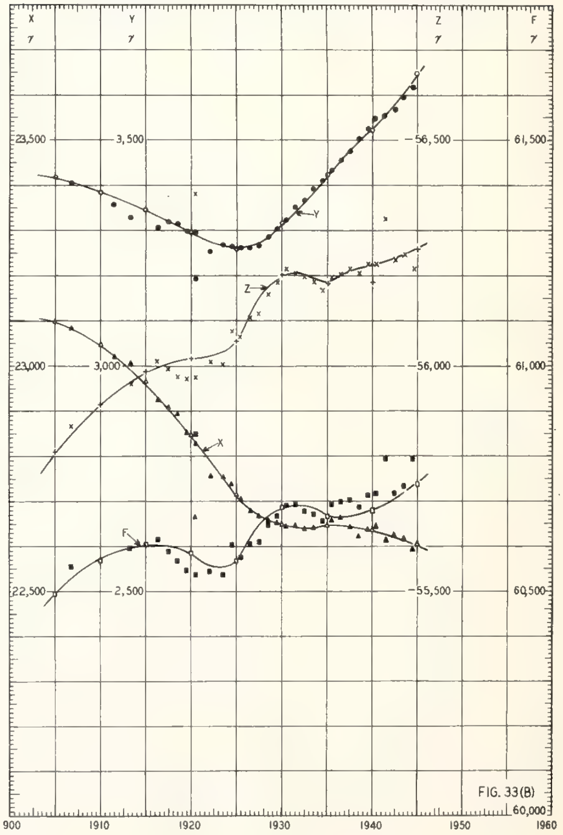
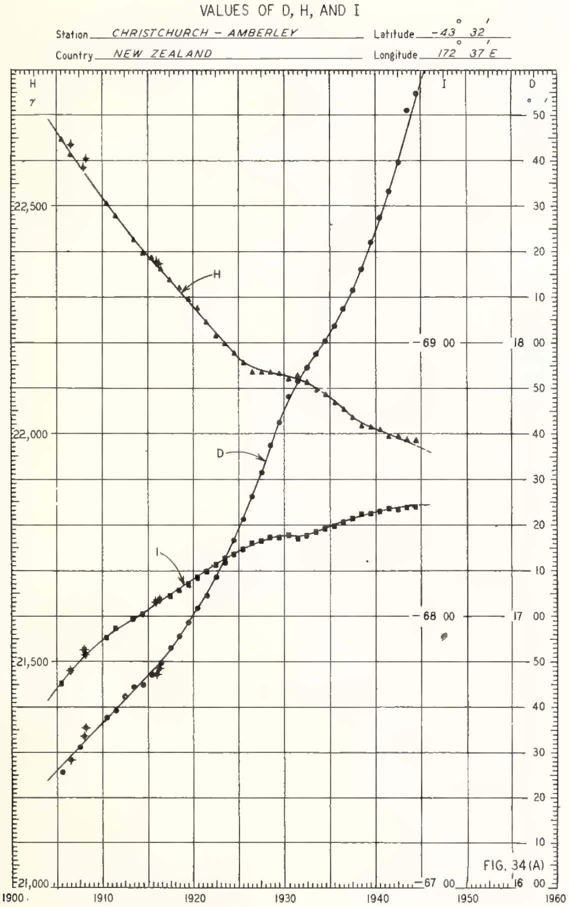


FIG. 33(B)

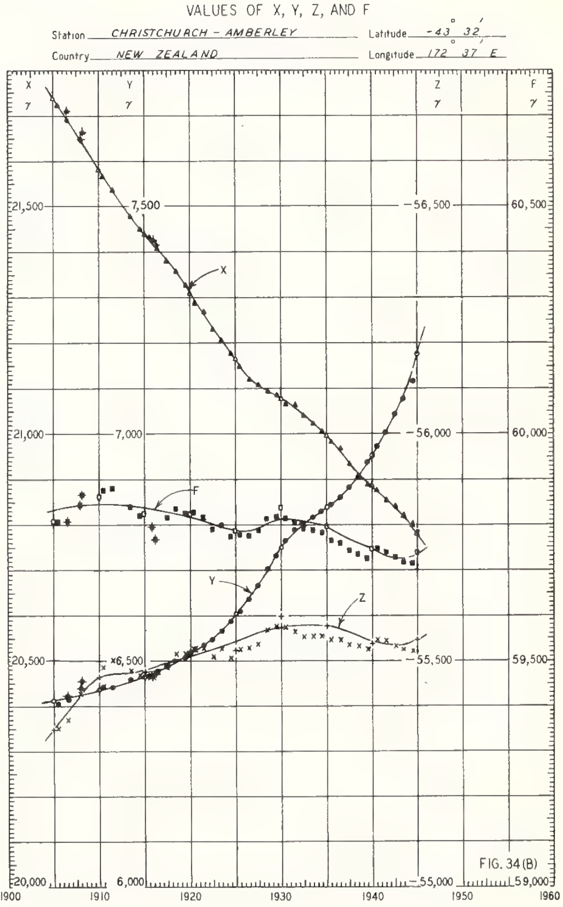


VALUES OF D, H, AND I

Station *CHRISTCHURCH – AMBERLEY* Latitude *−43° 32′*

Country *NEW ZEALAND* Longitude *172° 37′ E*

FIG. 34 (A)



VALUES OF X, Y, Z, AND F

Station *CHRISTCHURCH – AMBERLEY* Latitude *−43° 32′*

Country *NEW ZEALAND* Longitude *172° 37′ E*

FIG. 34 (B)

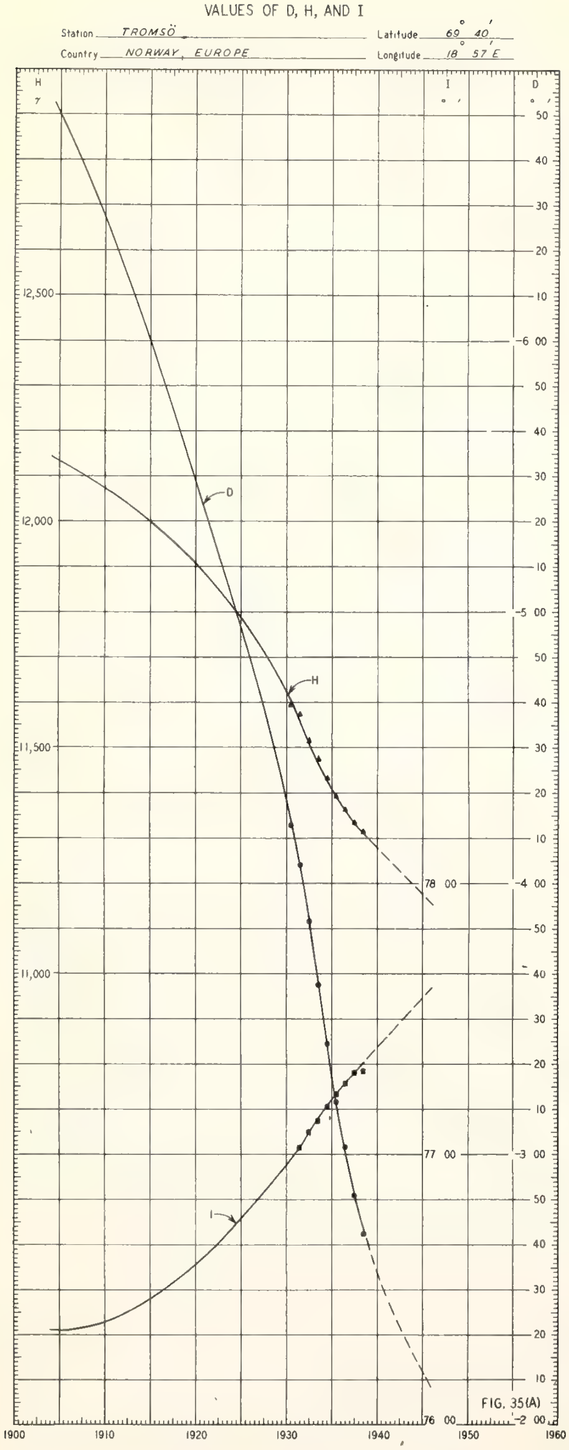


FIG. 35(A)

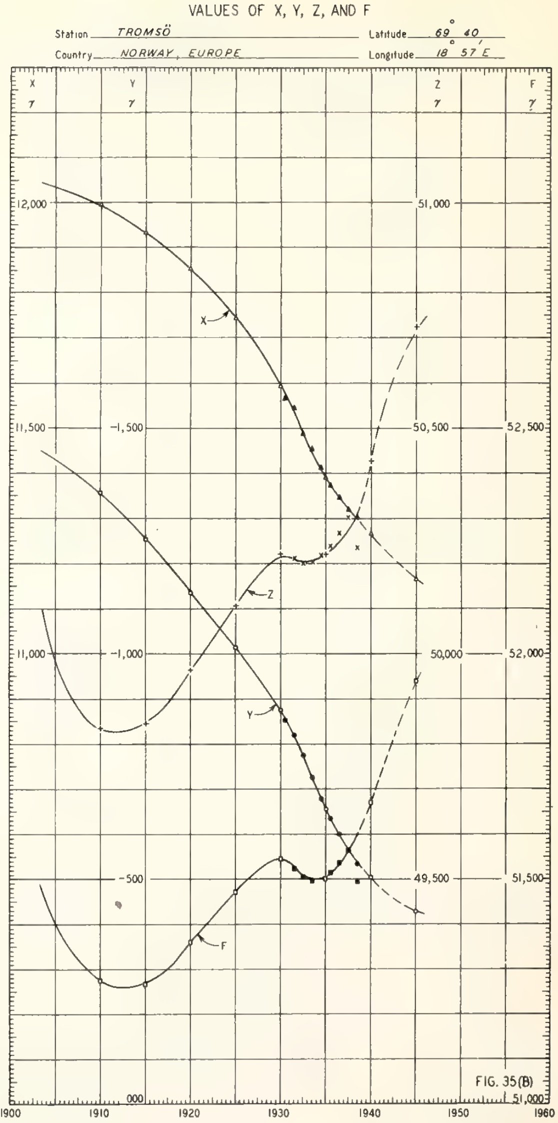


FIG. 35(B)

VALUES OF D, H, AND I

Station SODANKYLÄ Latitude 67° 22′

Country FINLAND, EUROPE Longitude 26° 39′ E

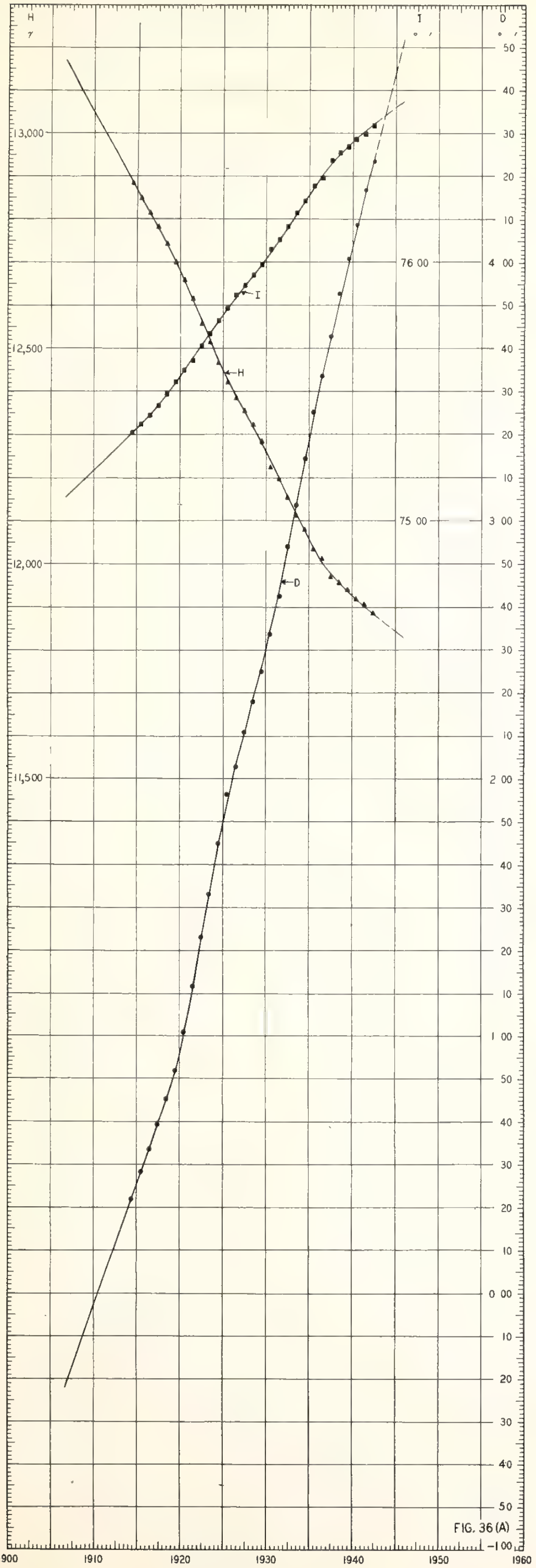


FIG. 36 (A)

VALUES OF X, Y, Z, AND F

Station SODANKYLÄ Latitude 67° 22′

Country FINLAND, EUROPE Longitude 26° 39′ E

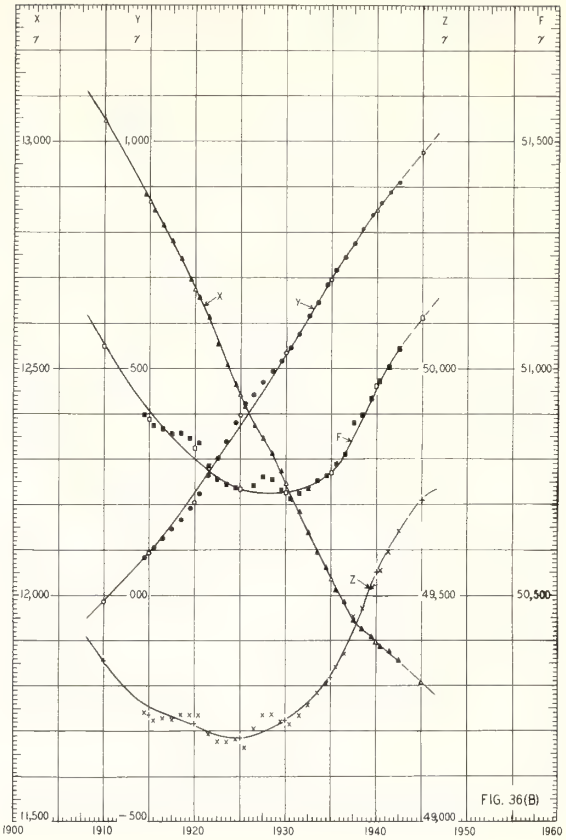


FIG. 36 (B)

VALUES OF D, H, AND I

Station DOMBÅS Latitude 62° 05′
Country NORWAY, EUROPE Longitude 09° 06′ E

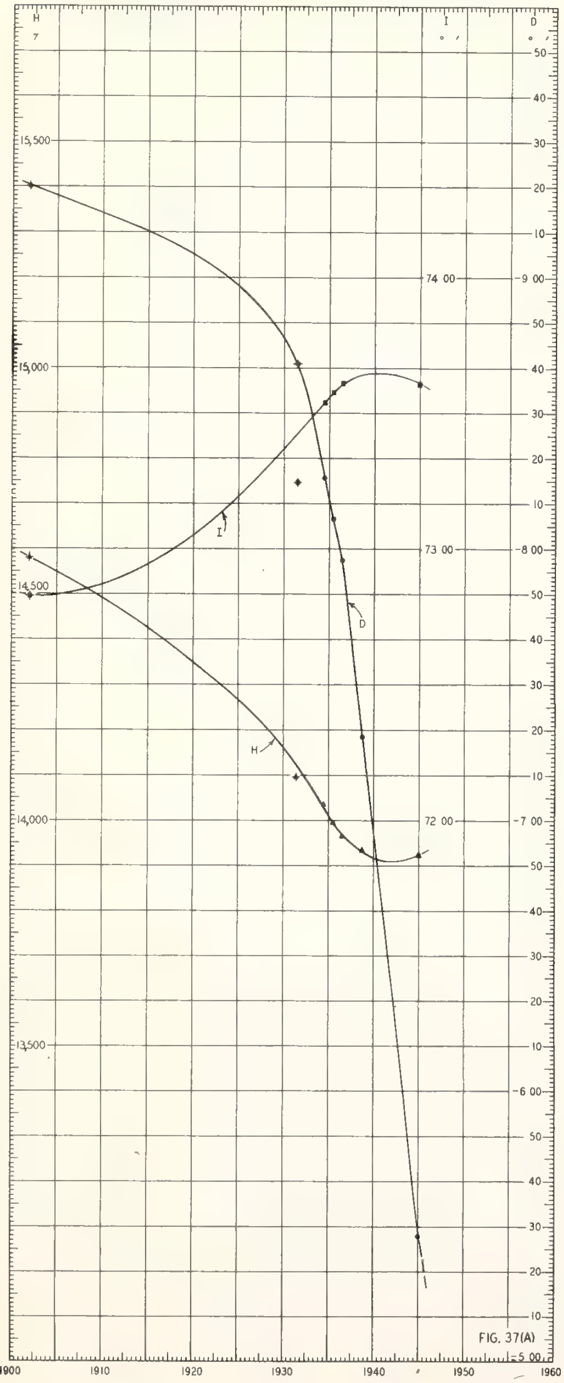


FIG. 37(A)

VALUES OF X, Y, Z, AND F

Station DOMBÅS Latitude 62° 05′
Country NORWAY, EUROPE Longitude 09° 06′ E

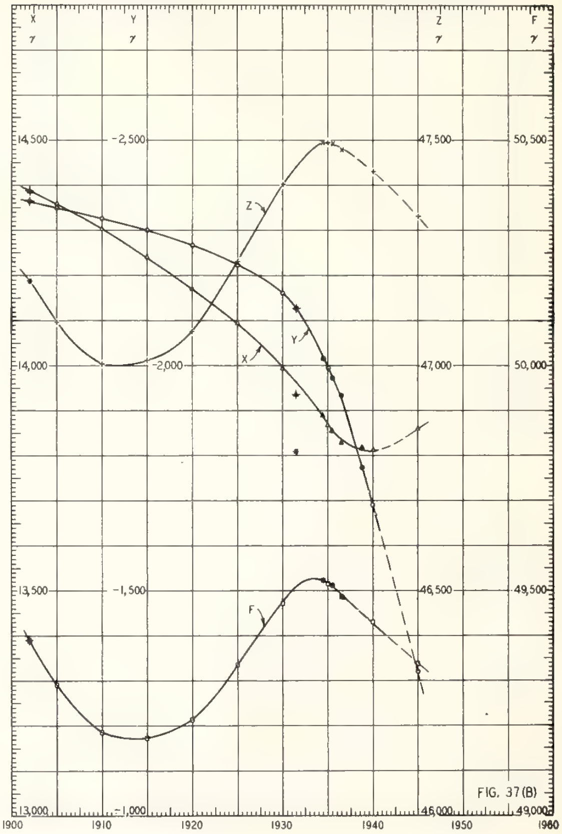


FIG. 37(B)

VALUES OF D, H, AND I

Station LERWICK Latitude 60° 08′

Country SCOTLAND, EUROPE Longitude 358° 49′ E

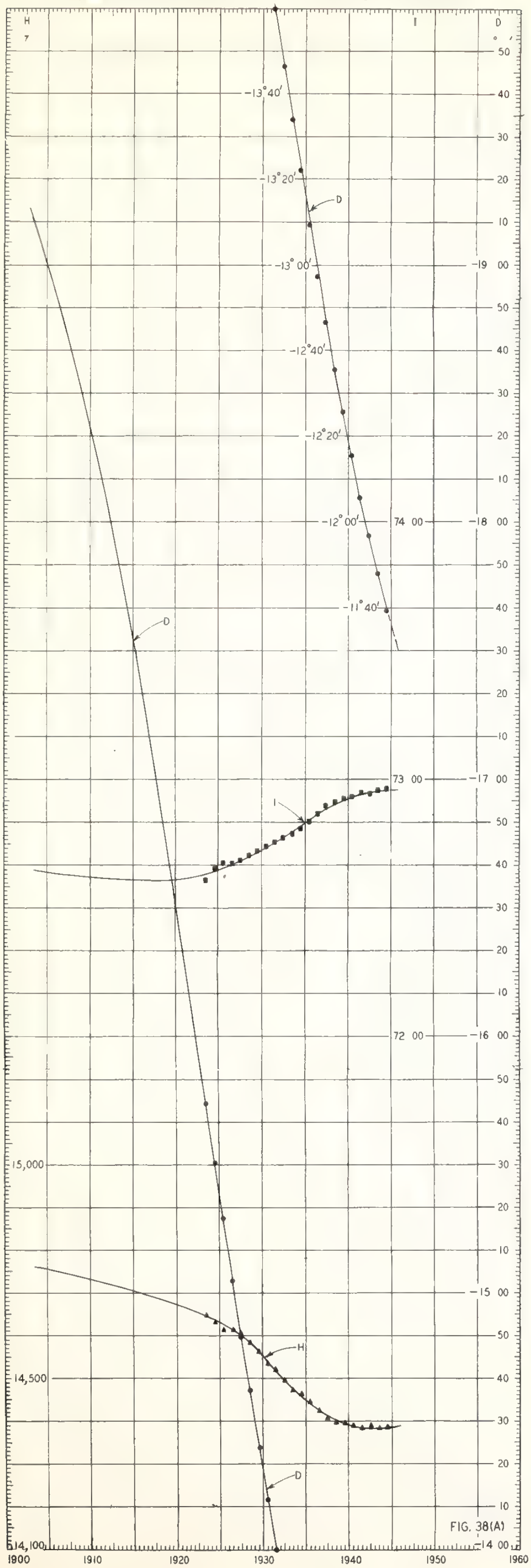


FIG. 38(A)

VALUES OF X, Y, Z, AND F

Station LERWICK Latitude 60° 08′

Country SCOTLAND, EUROPE Longitude 358° 49′ E

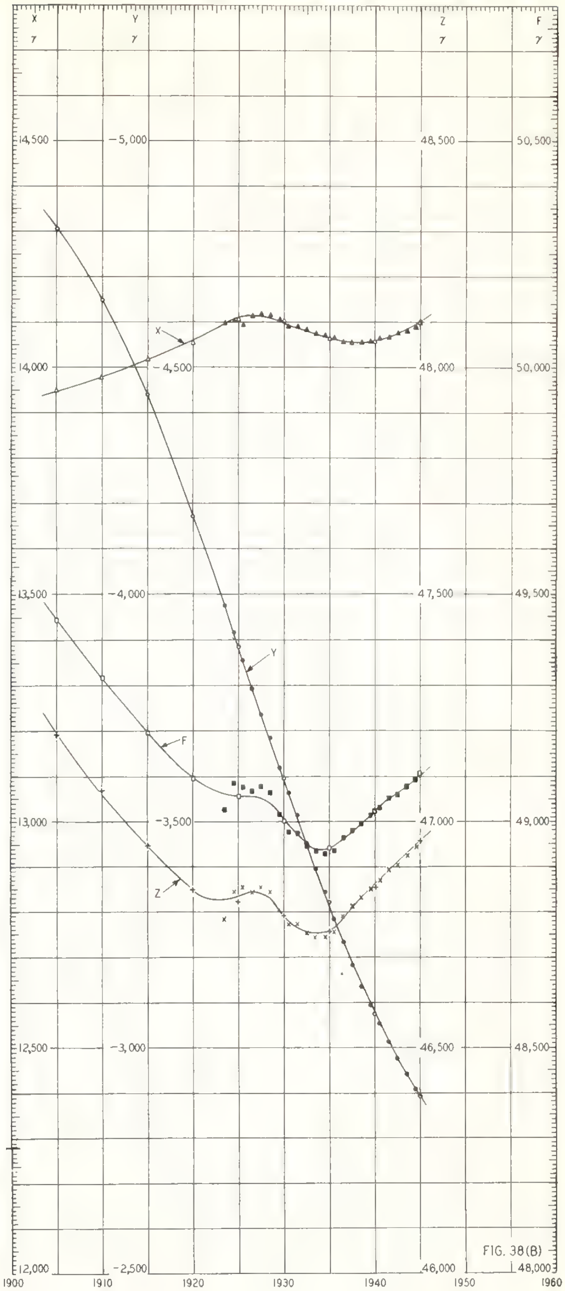


FIG. 38(B)

VALUES OF D, H, AND I

Station *OSLO* Latitude *59° 55'*

Country *NORWAY, EUROPE* Longitude *10° 43' E*

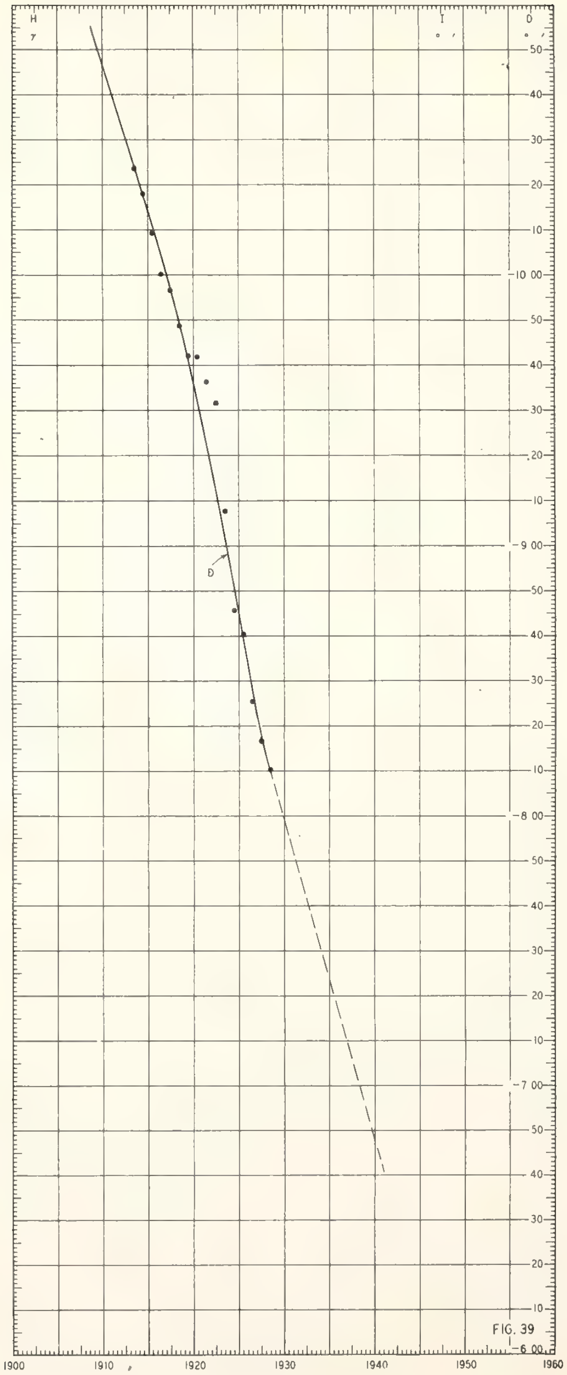


FIG. 39

VALUES OF D, H, AND I

Station SLUTSK Latitude 59° 41′
Country RUSSIA, EUROPE Longitude 30° 29′ E

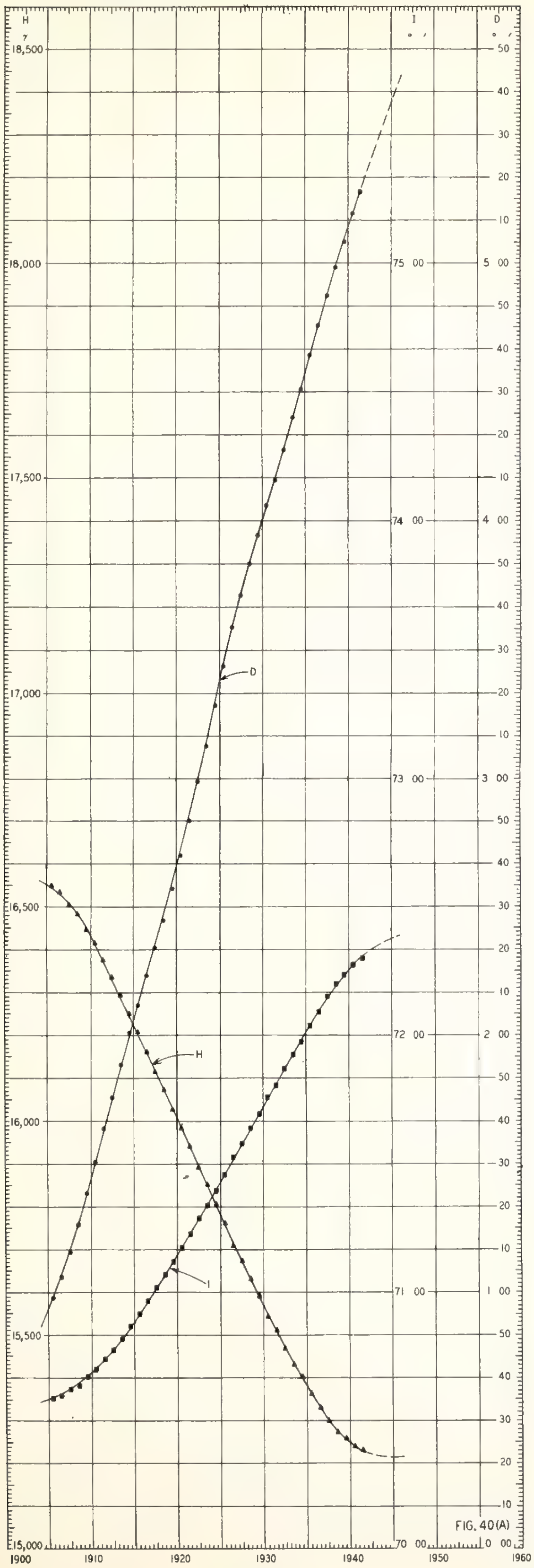


FIG. 40(A)

VALUES OF X, Y, Z, AND F

Station SLUTSK Latitude 59° 41′
Country RUSSIA, EUROPE Longitude 30° 29′ E

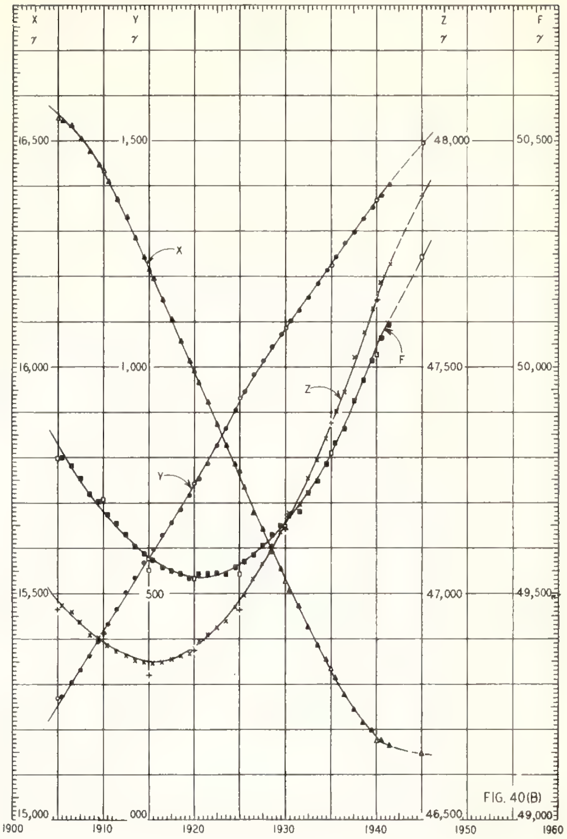


FIG. 40(B)

VALUES OF D, H, AND I

Station *LOVÖ* Latitude *59° 21′*

Country *SWEDEN, EUROPE* Longitude *17° 50′ E*

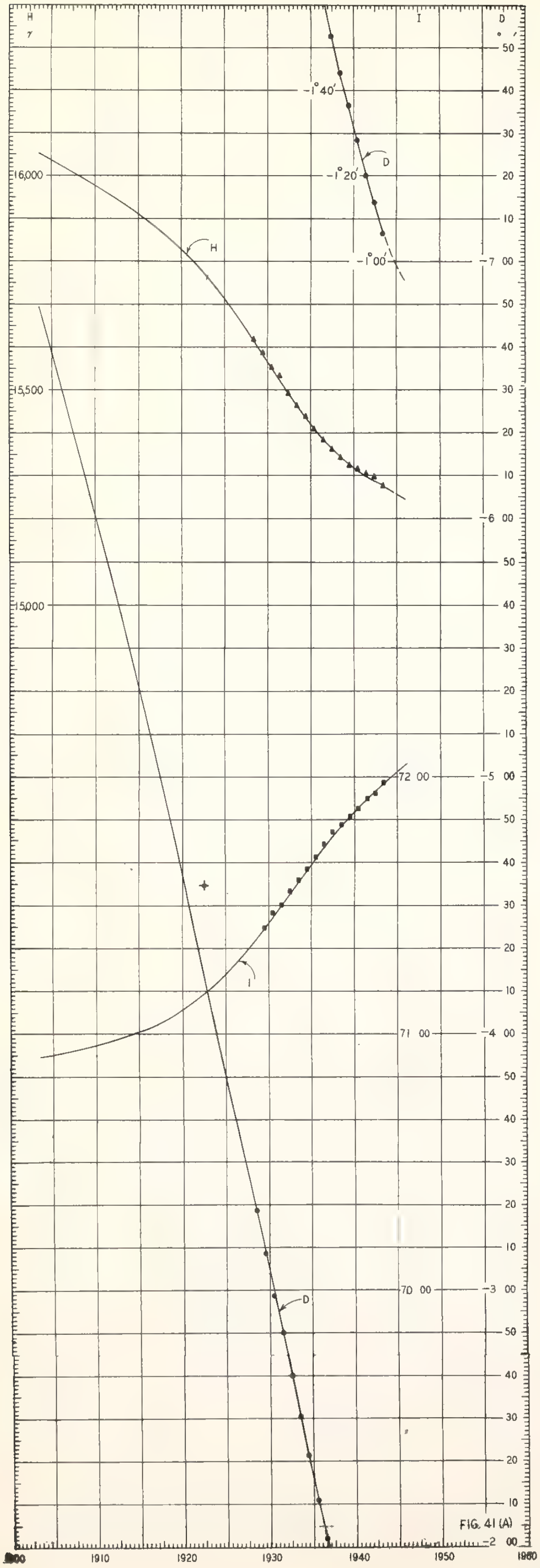


FIG. 41 (A)

VALUES OF X, Y, Z, AND F

Station *LOVÖ* Latitude *59° 21′*

Country *SWEDEN, EUROPE* Longitude *17° 50′ E*

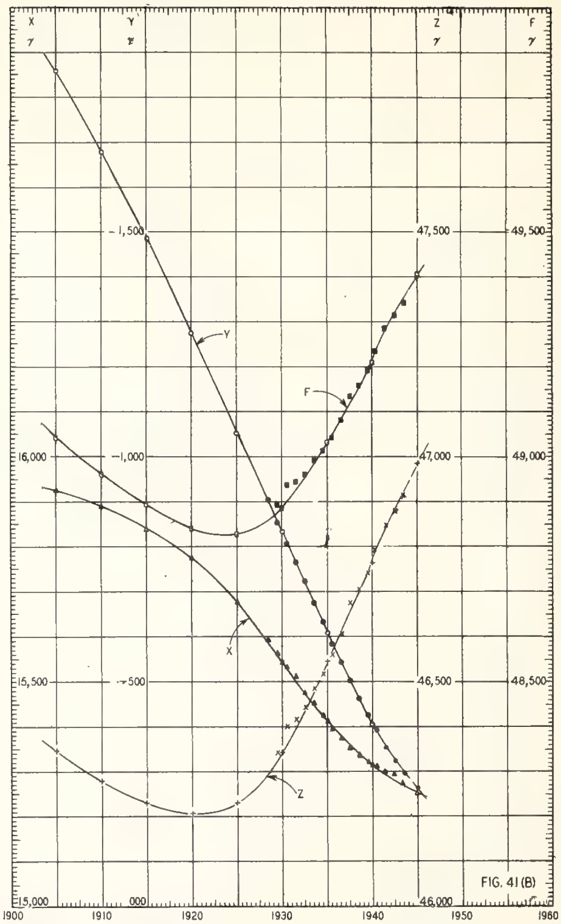


FIG. 41 (B)

VALUES OF D, H, AND I

Station *SVERDLOVSK – VYSSOKAYA DOUBRAVA* Latitude *56° 50′*

Country *RUSSIA, EUROPE* Longitude *60° 38′ E*

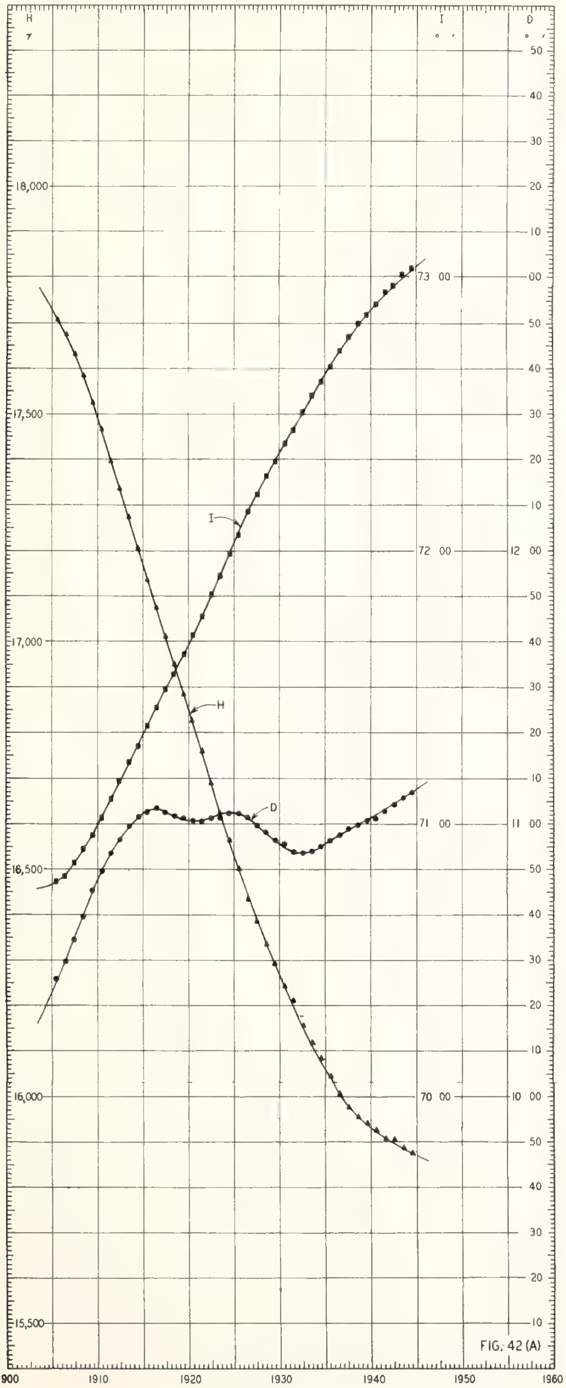


FIG. 42 (A)

VALUES OF X, Y, Z, AND F

Station *SVERDLOVSK – VYSSOKAYA DOUBRAVA* Latitude *56° 50′*

Country *RUSSIA, EUROPE* Longitude *60° 38′ E*

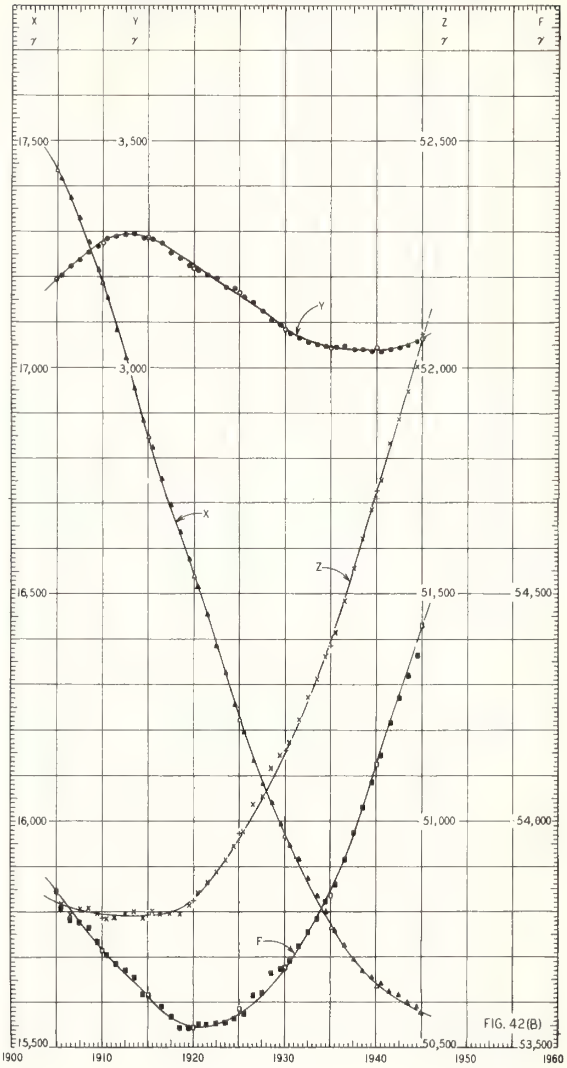


FIG. 42 (B)

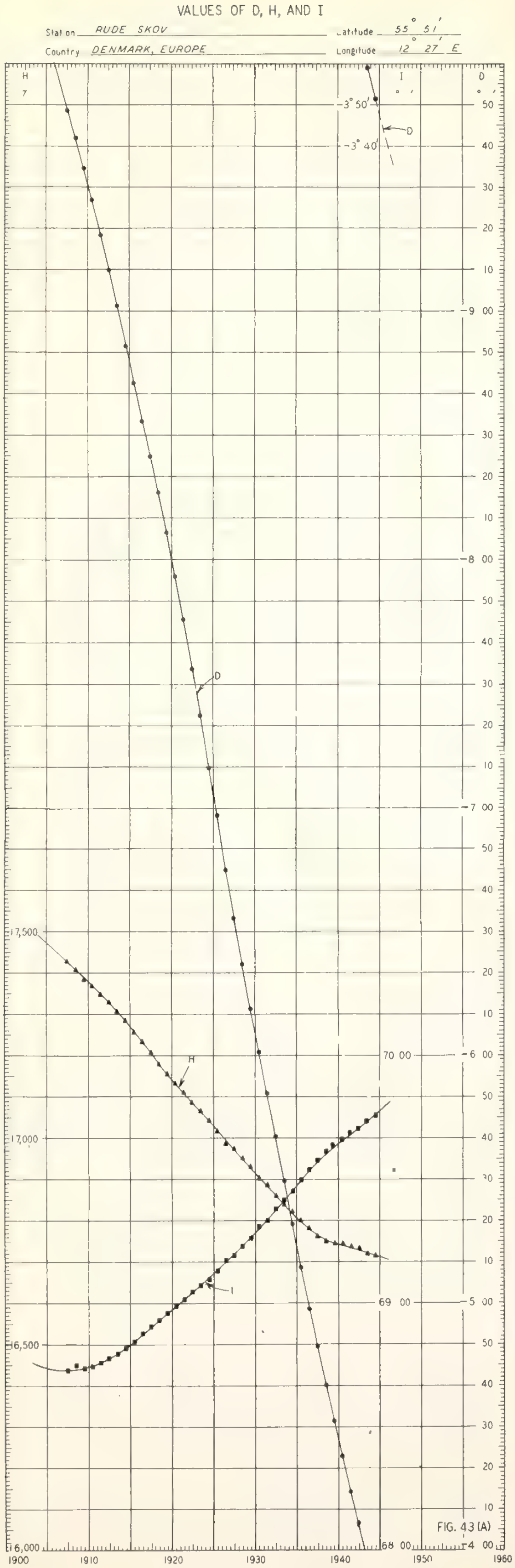


FIG. 43 (A)

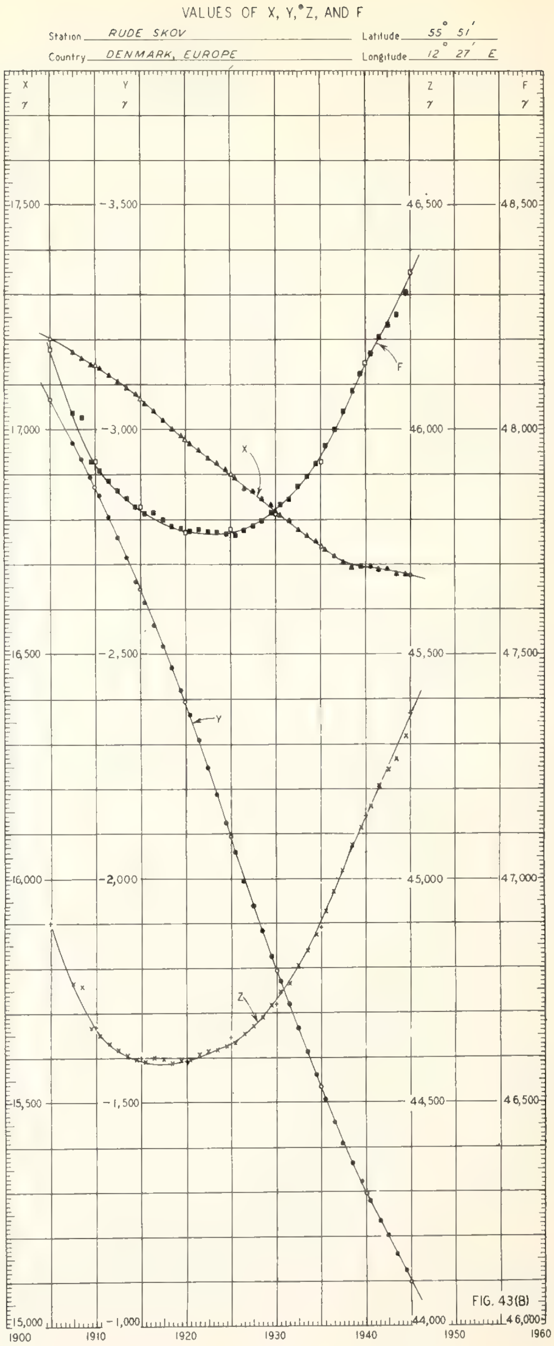


FIG. 43(B)

VALUES OF D, H, AND I

Station *ZAIMISHCHE – KASAN* Latitude *55° 50′*

Country *RUSSIA, EUROPE* Longitude *48° 51′ E*

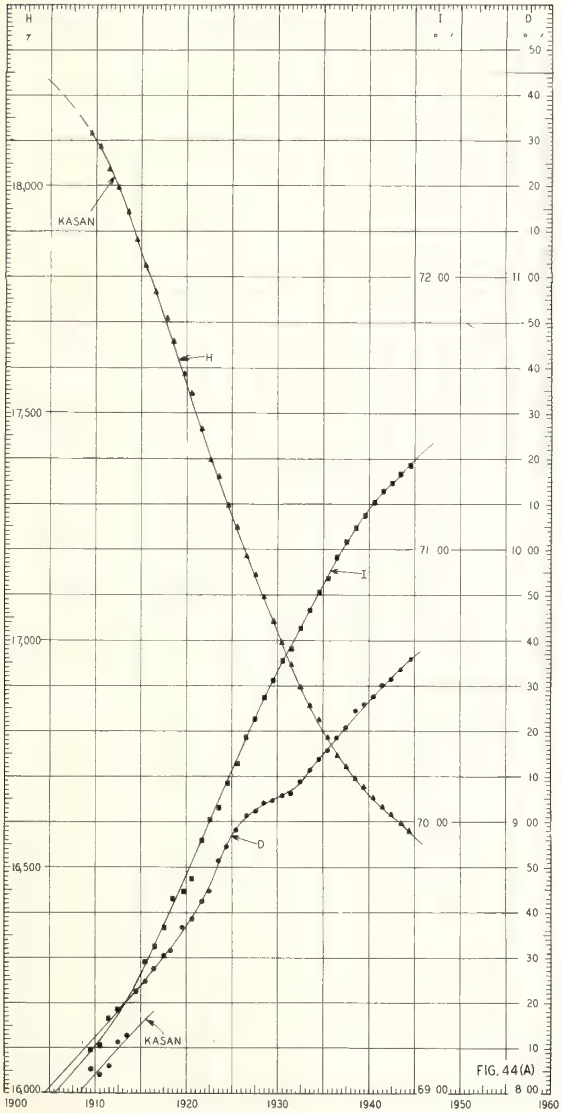


FIG. 44 (A)

VALUES OF X, Y, Z, AND F

Station *ZAIMISHCHE – KASAN* Latitude *55° 50′*

Country *RUSSIA, EUROPE* Longitude *48° 51′ E*

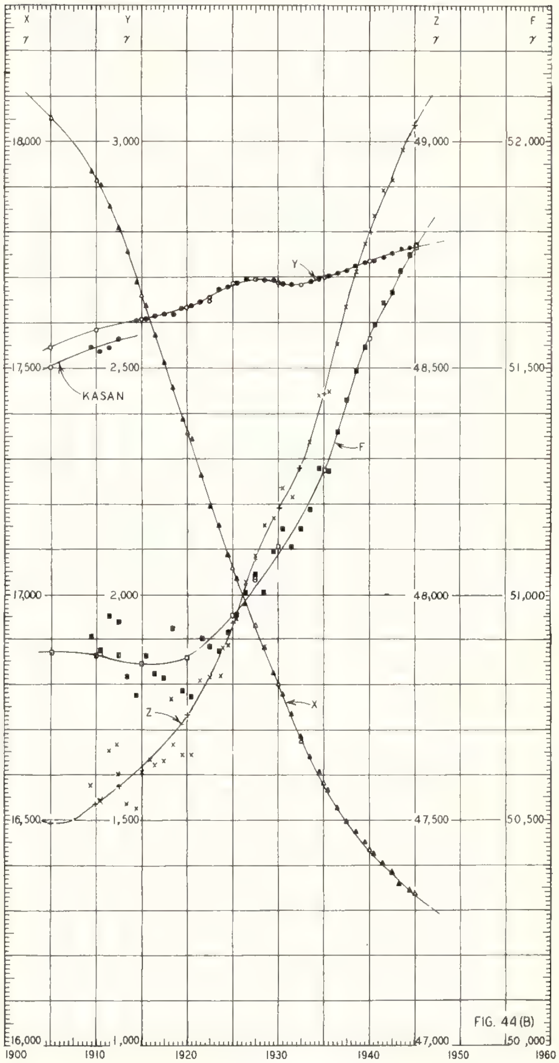


FIG. 44 (B)

VALUES OF D, H, AND I

Station *KOTCHÍNO* Latitude *55° 46′*

Country *RUSSIA, EUROPE* Longitude *37° 58′ E*

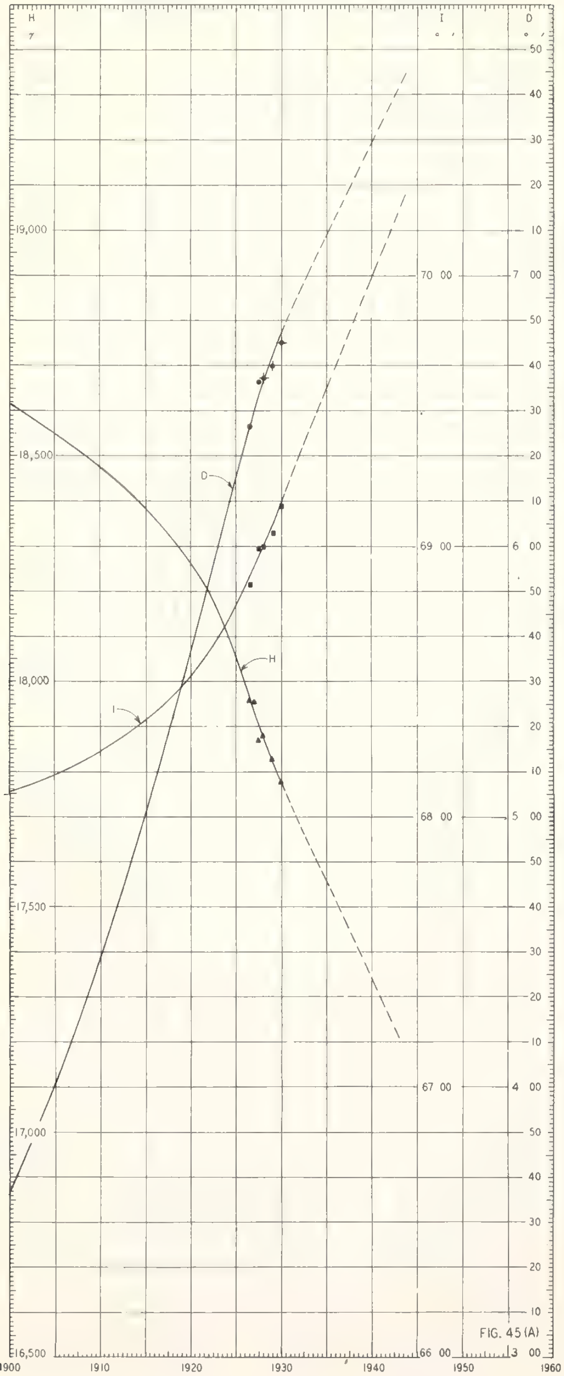


FIG. 45 (A)

VALUES OF X, Y, Z, AND F

Station *KOTCHÍNO* Latitude *55° 46′*

Country *RUSSIA, EUROPE* Longitude *37° 58′ E*

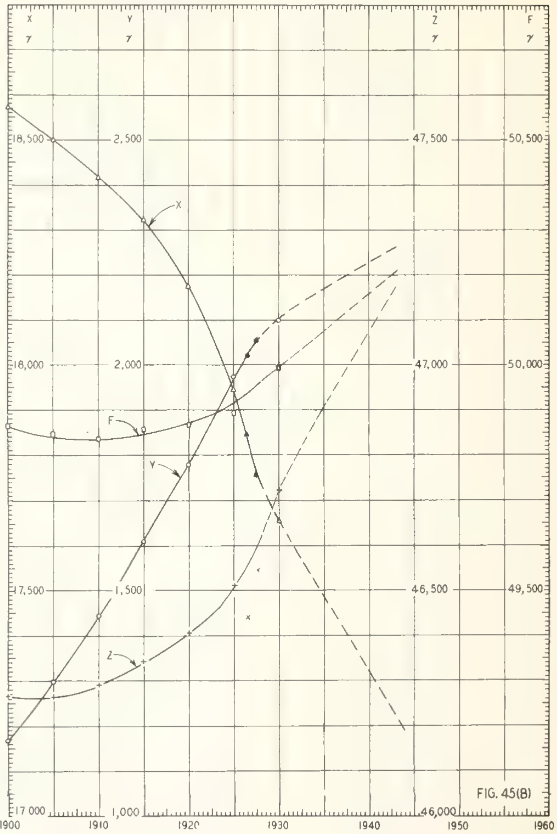


FIG. 45(B)

VALUES OF D, H, AND I

Station ESKDALEMUIR Latitude 55° 18.9'

Country GREAT BRITIAN, EUROPE Longitude 356° 48' E

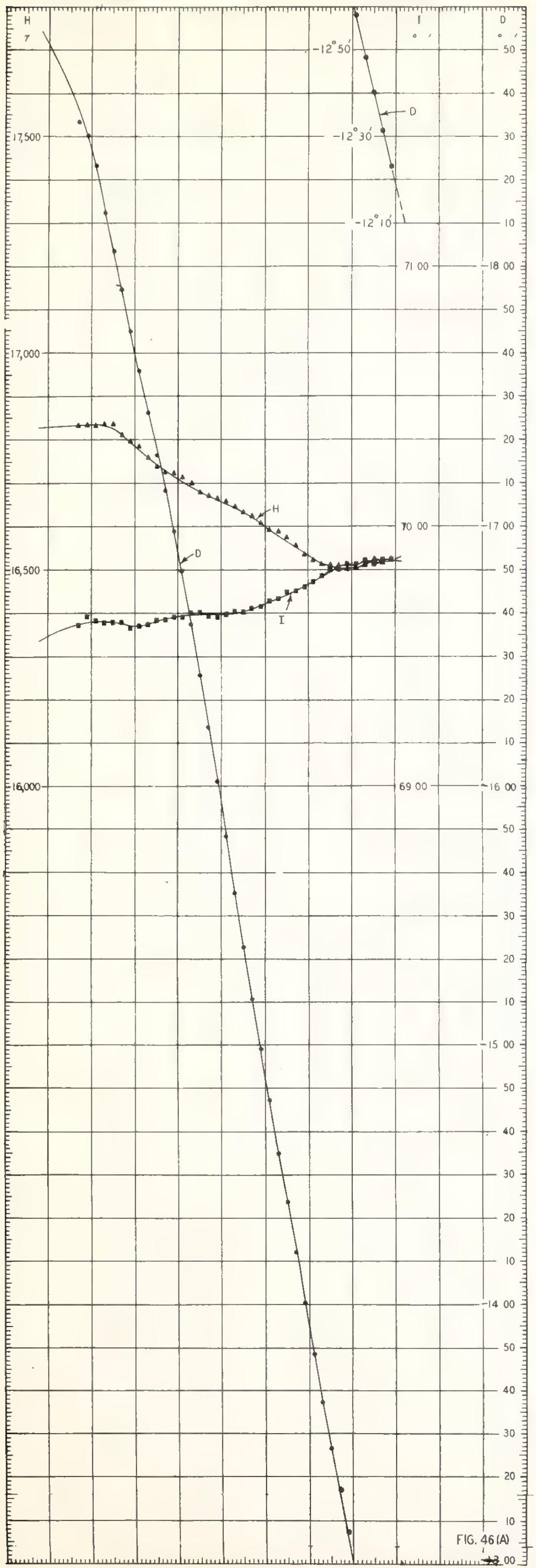


FIG. 46(A)

VALUES OF X, Y, Z, AND F

Station ESKDALEMUIR Latitude 55° 18.9'

Country GREAT BRITIAN, EUROPE Longitude 356° 48' E

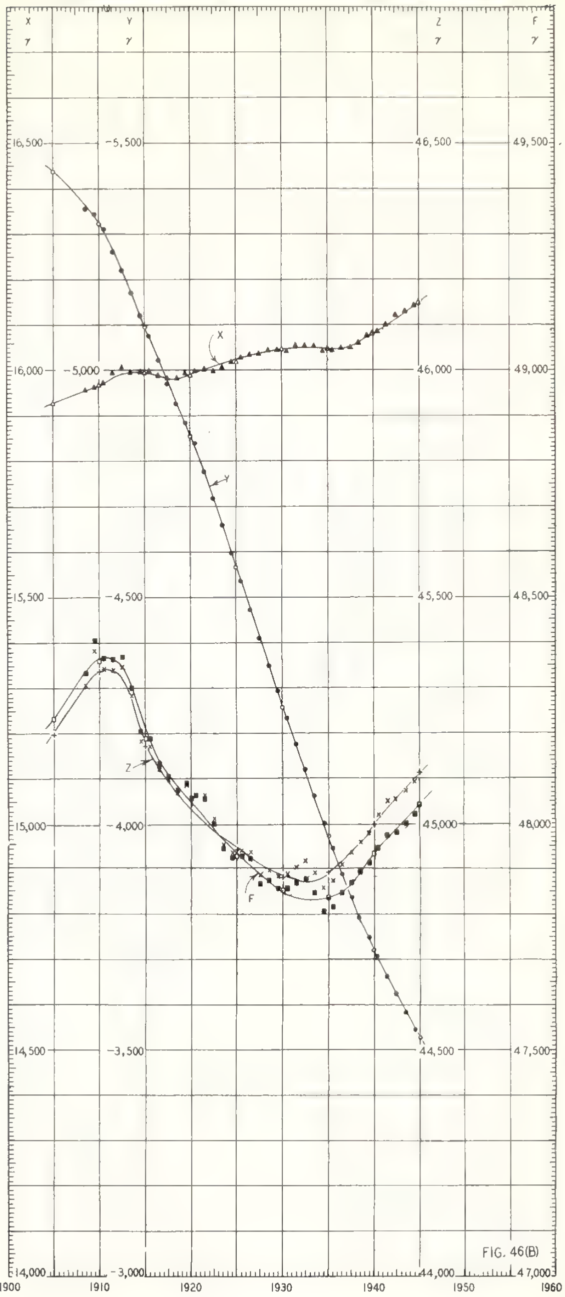


FIG. 46(B)

VALUES OF D, H, AND I

Station HEL Latitude 54° 36′

Country POLAND, EUROPE Longitude 18° 48′ E

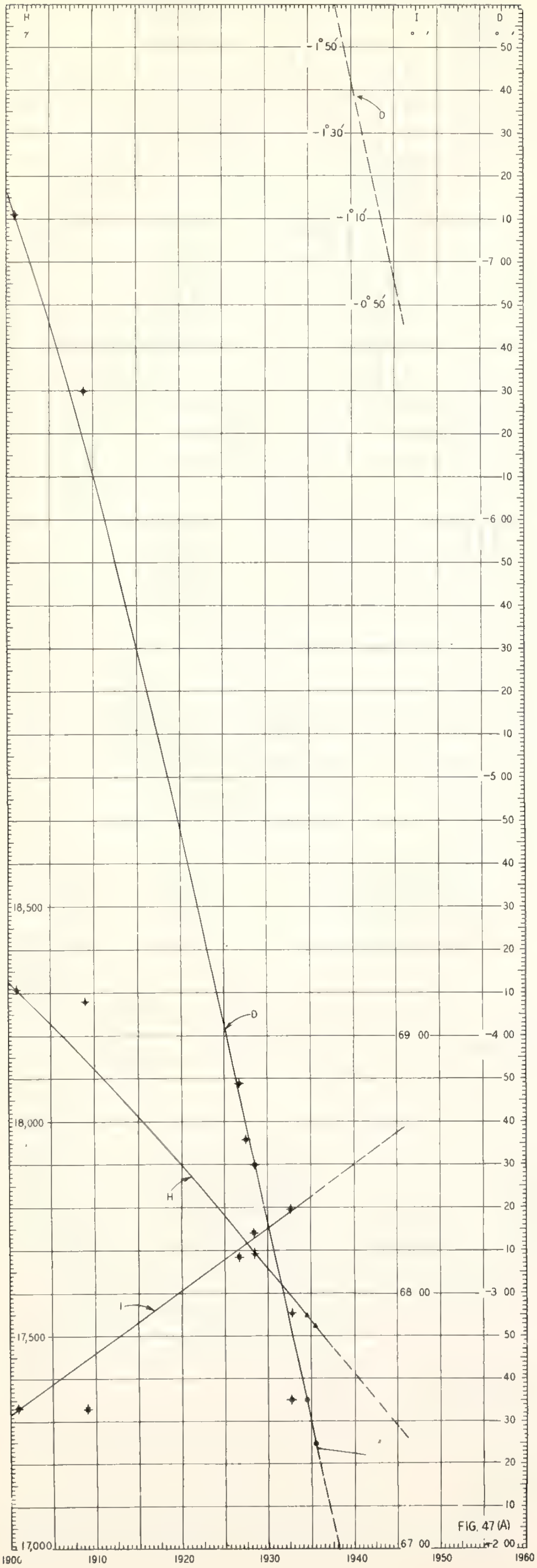


FIG. 47 (A)

VALUES OF X, Y, Z, AND F

Station HEL Latitude 54° 36′

Country POLAND, EUROPE Longitude 18° 48′ E

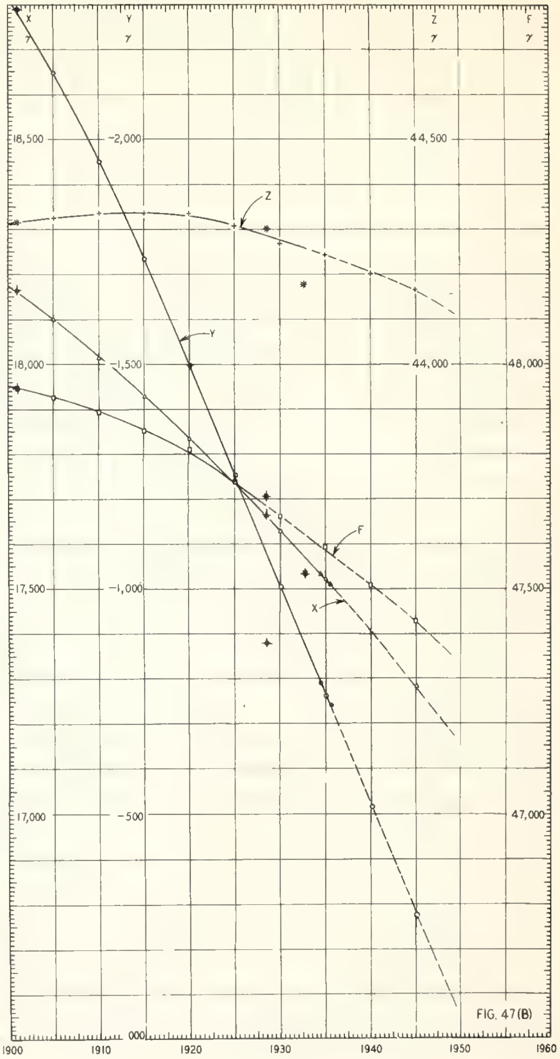


FIG. 47 (B)

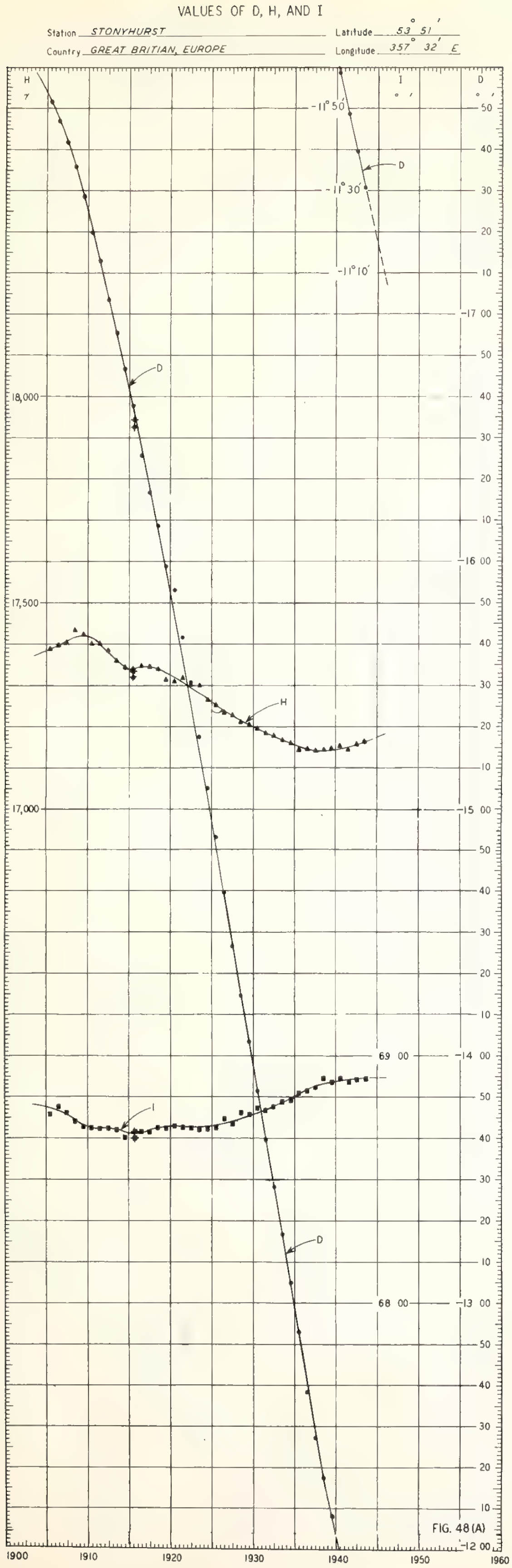


FIG. 48 (A)

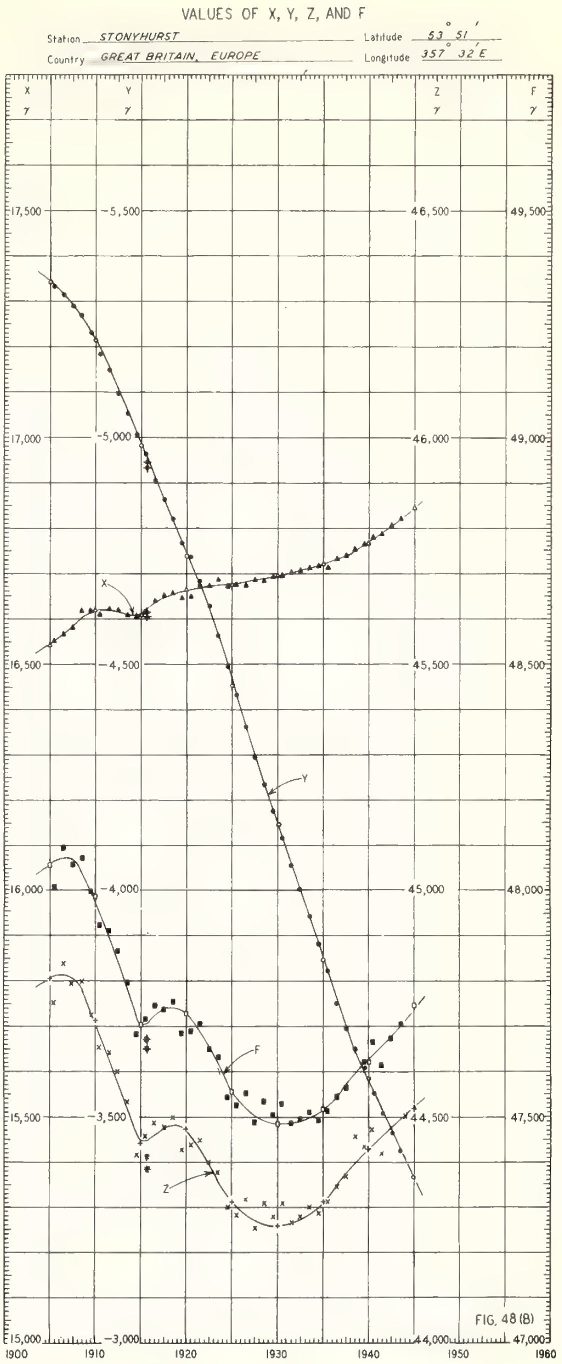


FIG. 48 (B)

VALUES OF D, H, AND I

Station *WILHELMSHAVEN* Latitude *53° 32′*
Country *GERMANY, EUROPE* Longitude *08° 09′ E*

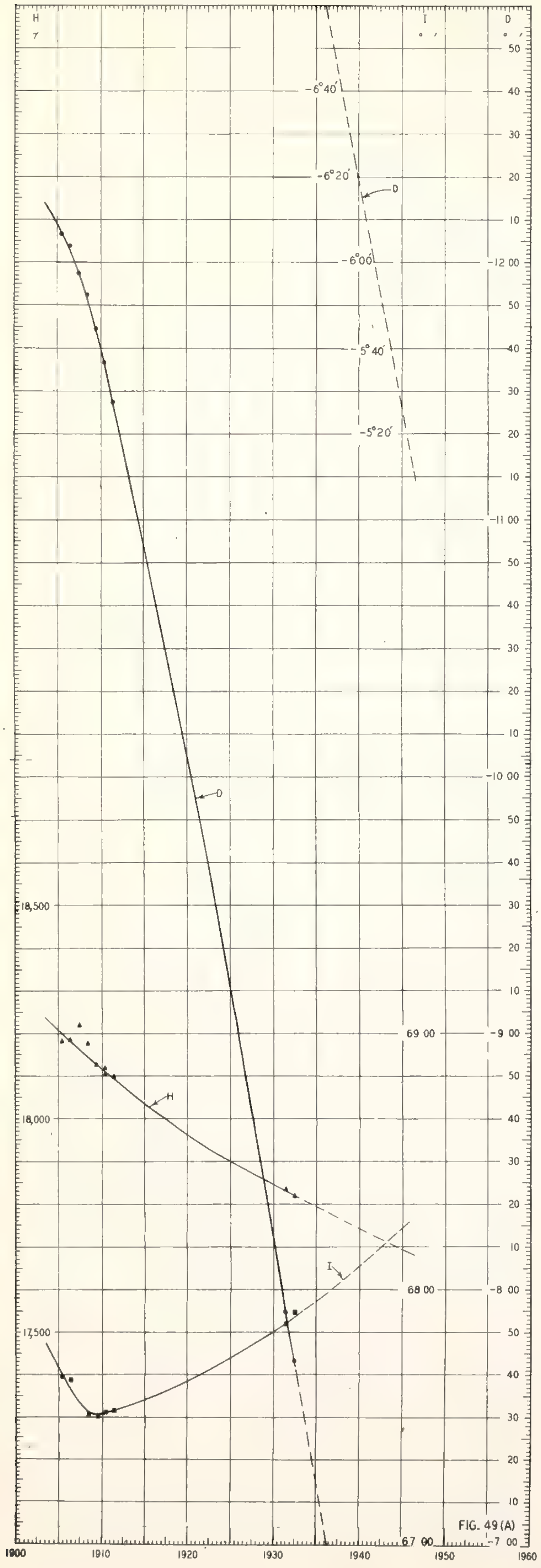


FIG. 49 (A)

VALUES OF X, Y, Z, AND F

Station *WILHELMSHAVEN* Latitude *53° 32′*
Country *GERMANY, EUROPE* Longitude *08° 09′ E*

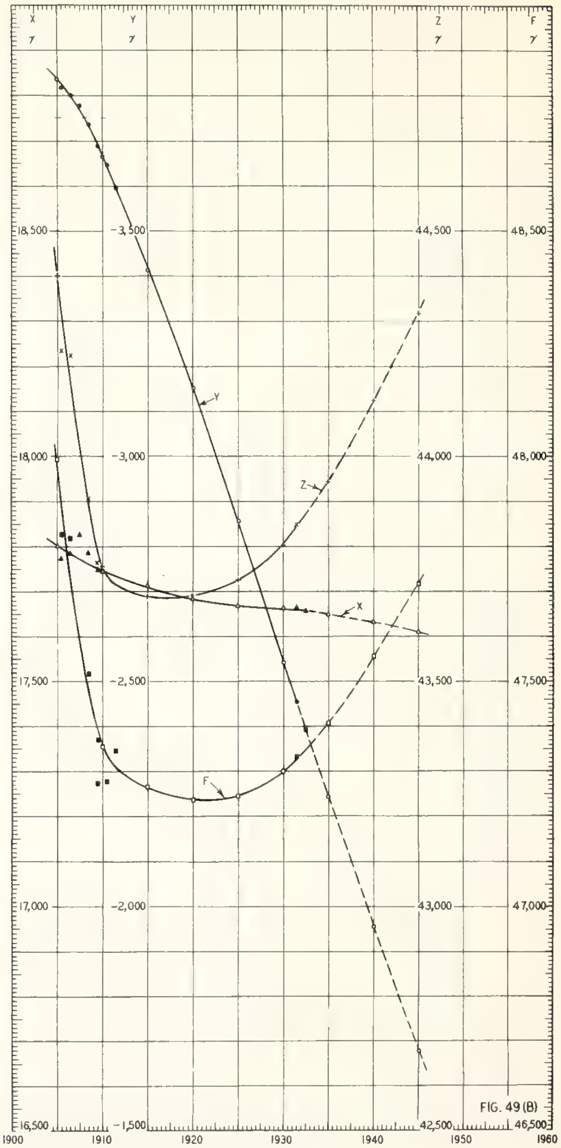


FIG. 49 (B)

VALUES OF D, H, AND I

Station *POTSDAM-SEDDIN-NIEMEGK* Latitude *52° 23′*
Country *GERMANY, EUROPE* Longitude *13° 04′ E*

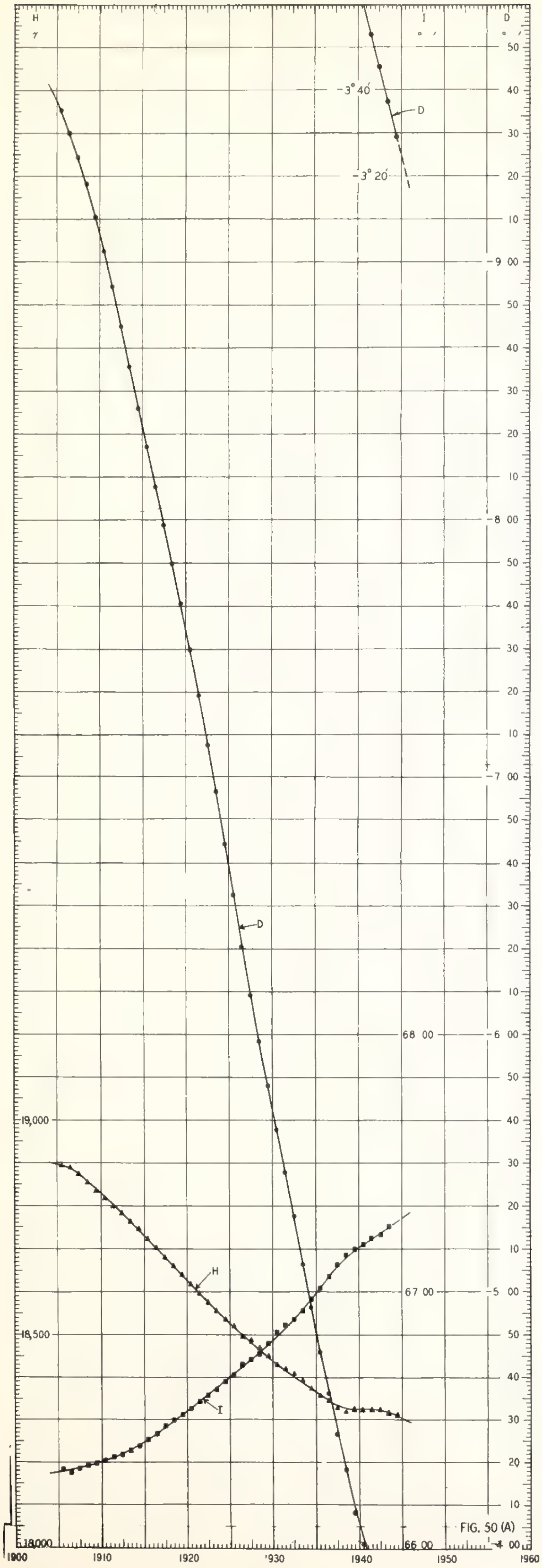


FIG. 50 (A)

VALUES OF X, Y, Z, AND F

Station *POTSDAM - SEDDIN - NIEMEGK* Latitude *52° 23′*
Country *GERMANY, EUROPE* Longitude *13° 04′ E*

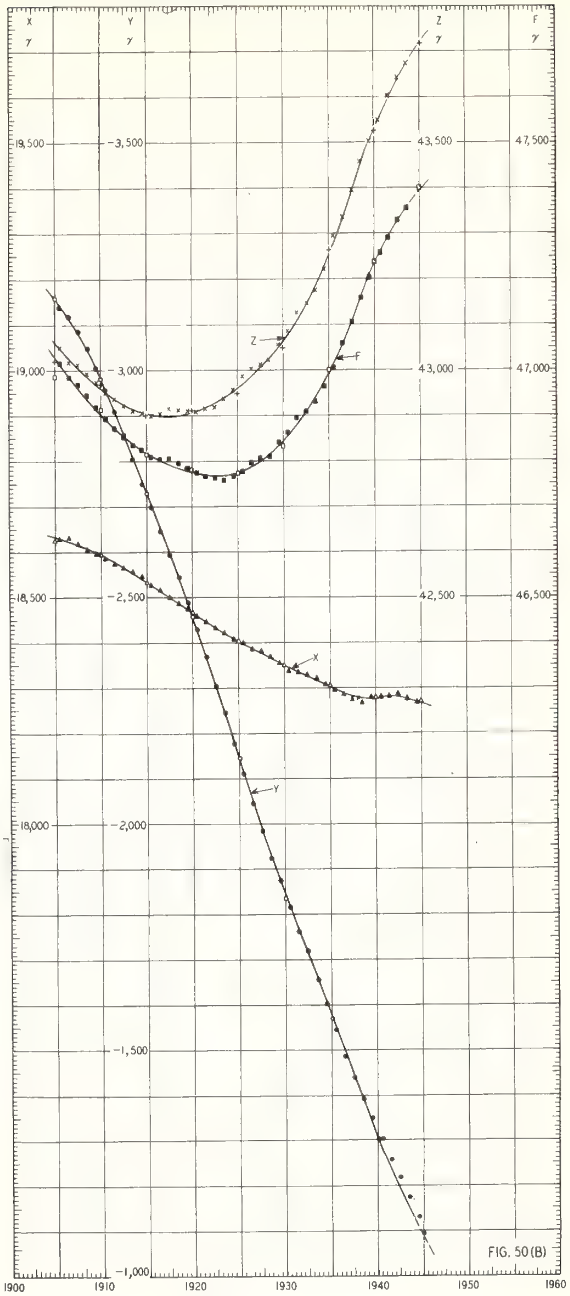
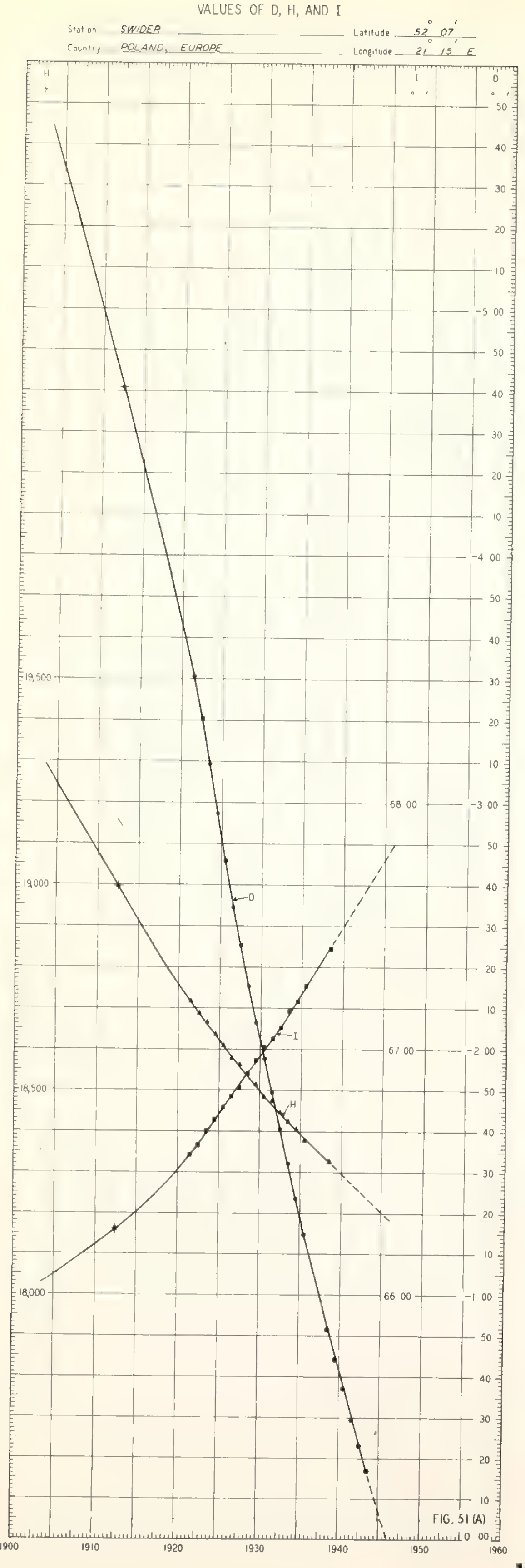


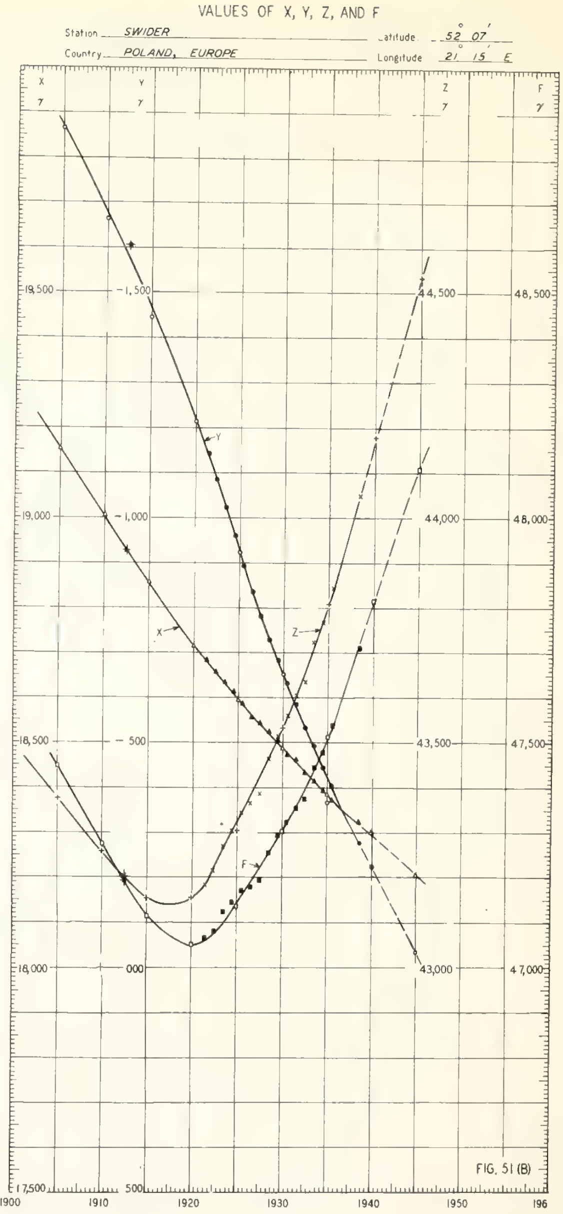
FIG. 50 (B)


VALUES OF D, H, AND I

Station SWIDER Latitude 52° 07′

Country POLAND, EUROPE Longitude 21° 15′ E

FIG. 51 (A)


VALUES OF X, Y, Z, AND F

Station SWIDER Latitude 52° 07′

Country POLAND, EUROPE Longitude 21° 15′ E

FIG. 51 (B)

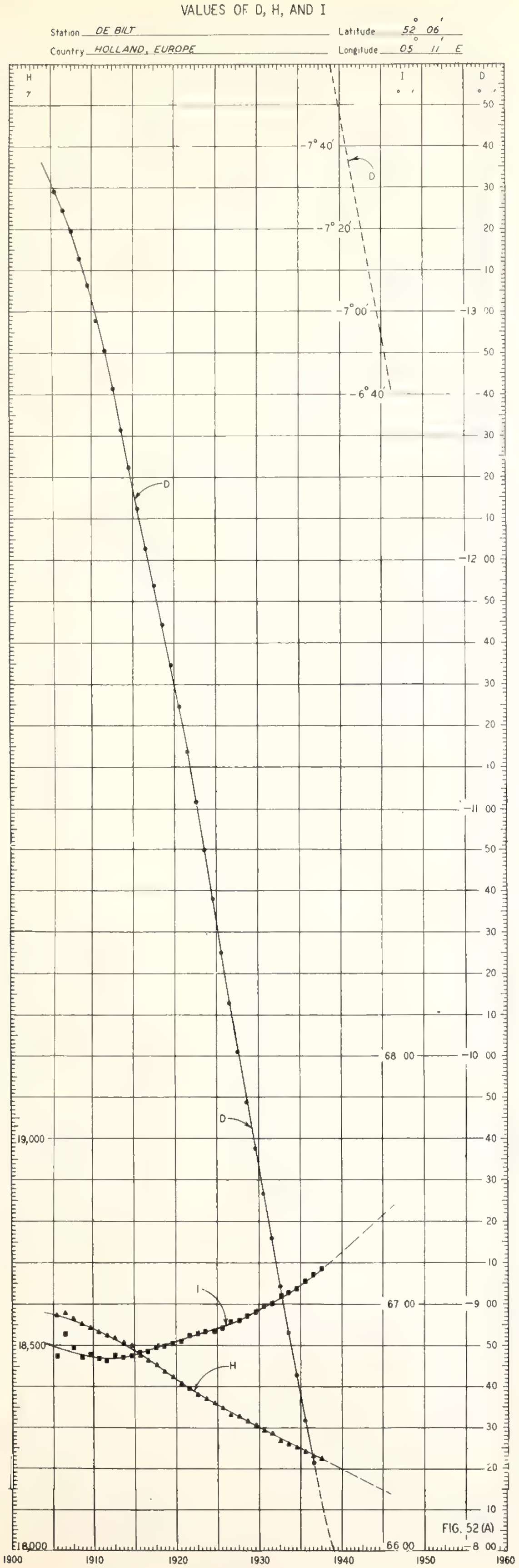


FIG. 52 (A)

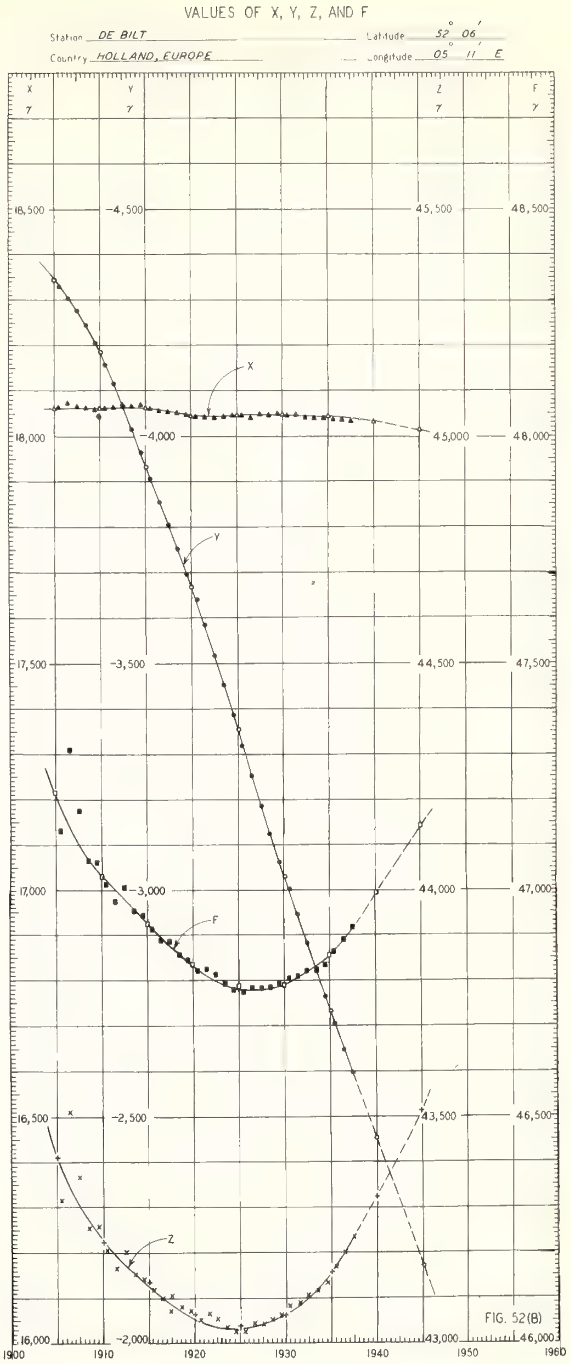


FIG. 52 (B)

VALUES OF D, H, AND I

Station *VALENCIA (CAHIRCIVEEN)* Latitude *51° 56′*
Country *GREAT BRITIAN, EUROPE* Longitude *349° 45′ E*

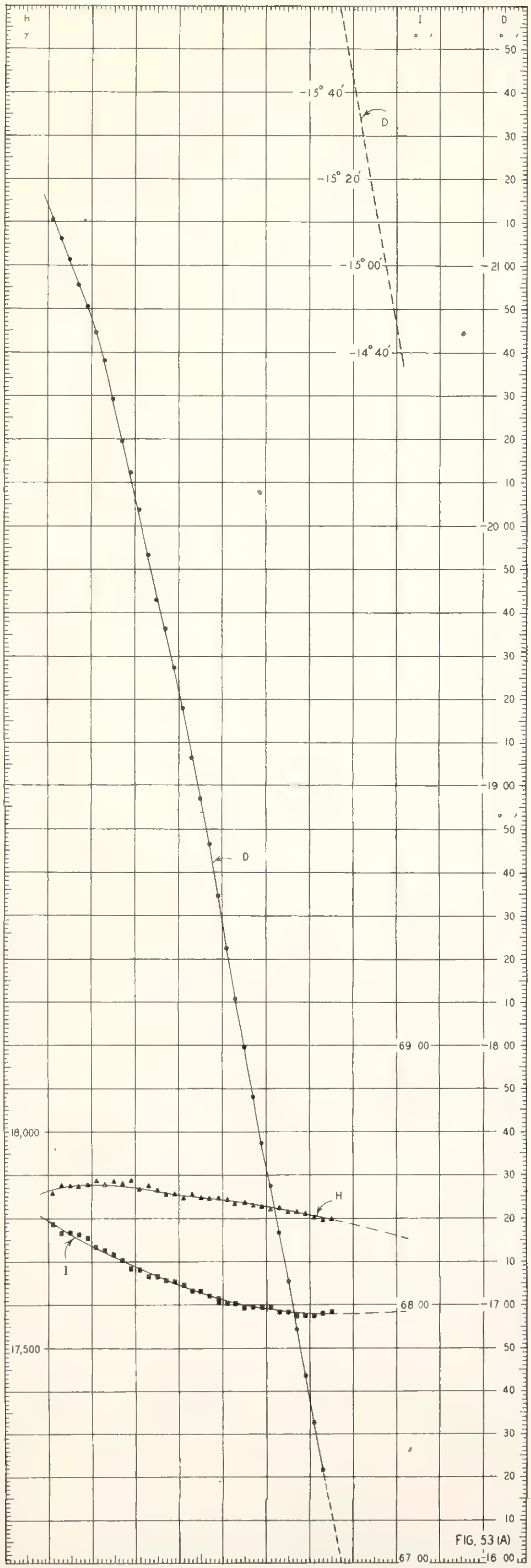


FIG. 53 (A)

VALUES OF X, Y, Z, AND F

Station *VALENCIA (CAHIRCIVEEN)* Latitude *51° 56′*
Country *GREAT BRITIAN, EUROPE* Longitude *349° 45′ E*

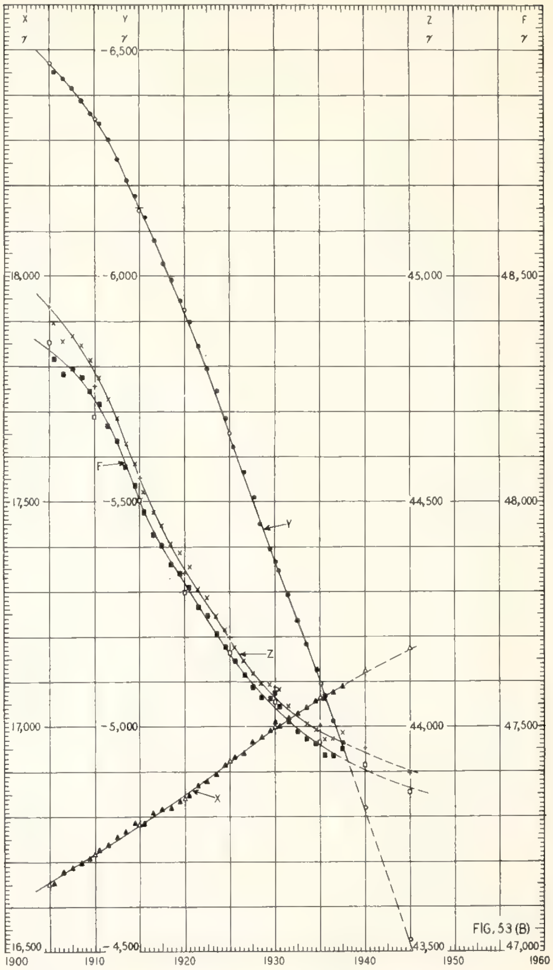


FIG. 53 (B)

VALUES OF D, H, AND I

Station CLAUSTHAL Latitude 51° 48'

Country GERMANY, EUROPE Longitude 10° 20' E

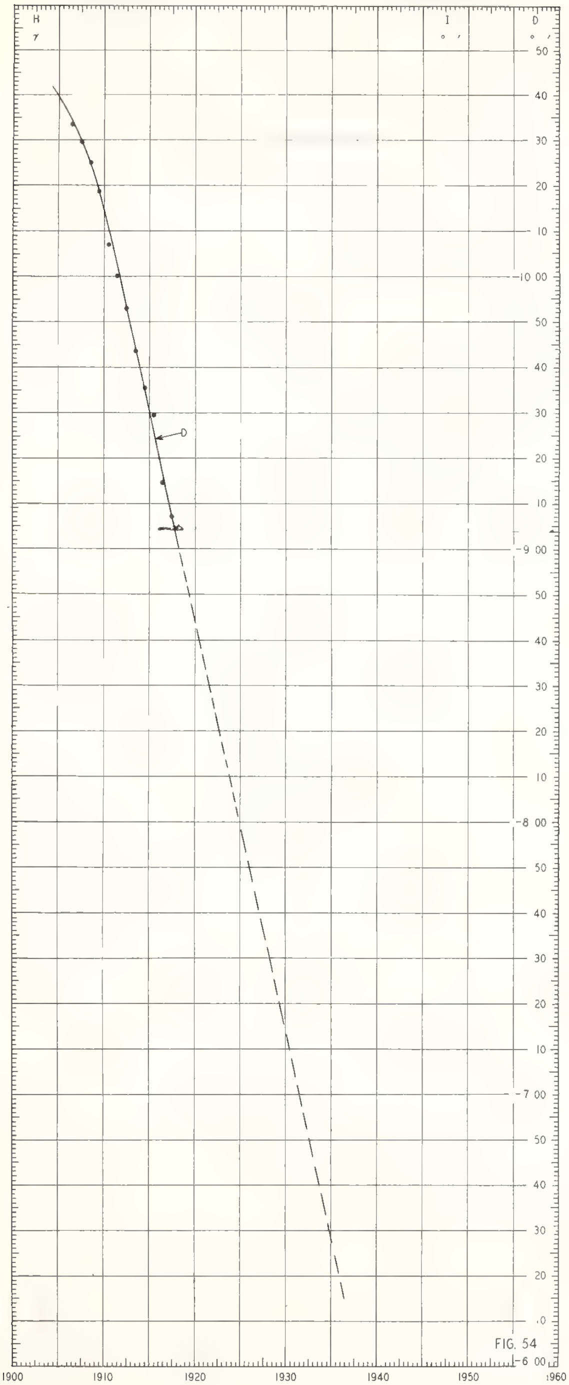


FIG. 54

VALUES OF D, H, AND I

Station NIZHNEDEVITSK Latitude 51° 31′
Country RUSSIA, EUROPE Longitude 38° 22′ E

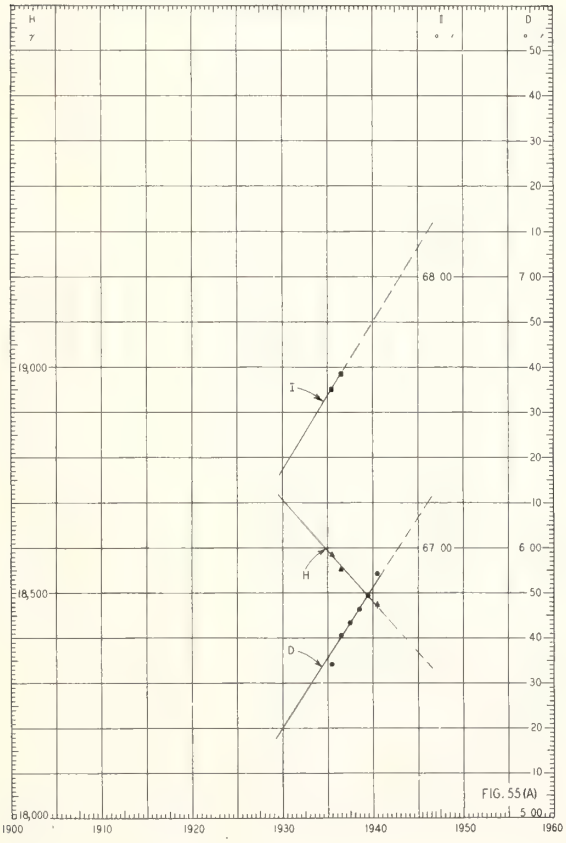


FIG. 55 (A)

VALUES OF X, Y, Z, AND F

Station NIZHNEDEVITSK Latitude 51° 31′
Country RUSSIA, EUROPE Longitude 38° 22′ E

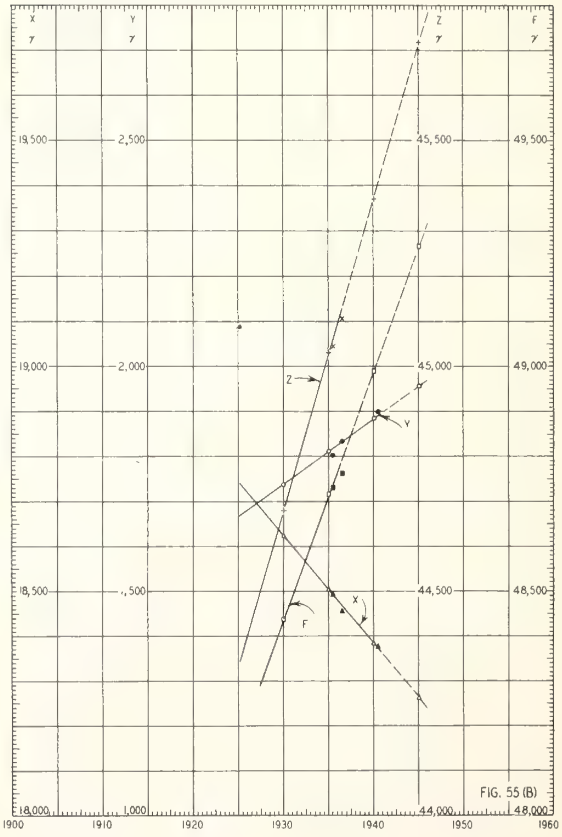


FIG. 55 (B)

VALUES OF D, H, AND I

Station *BOCHUM* Latitude *51° 29'*
Country *GERMANY, EUROPE* Longitude *07° 14'E*

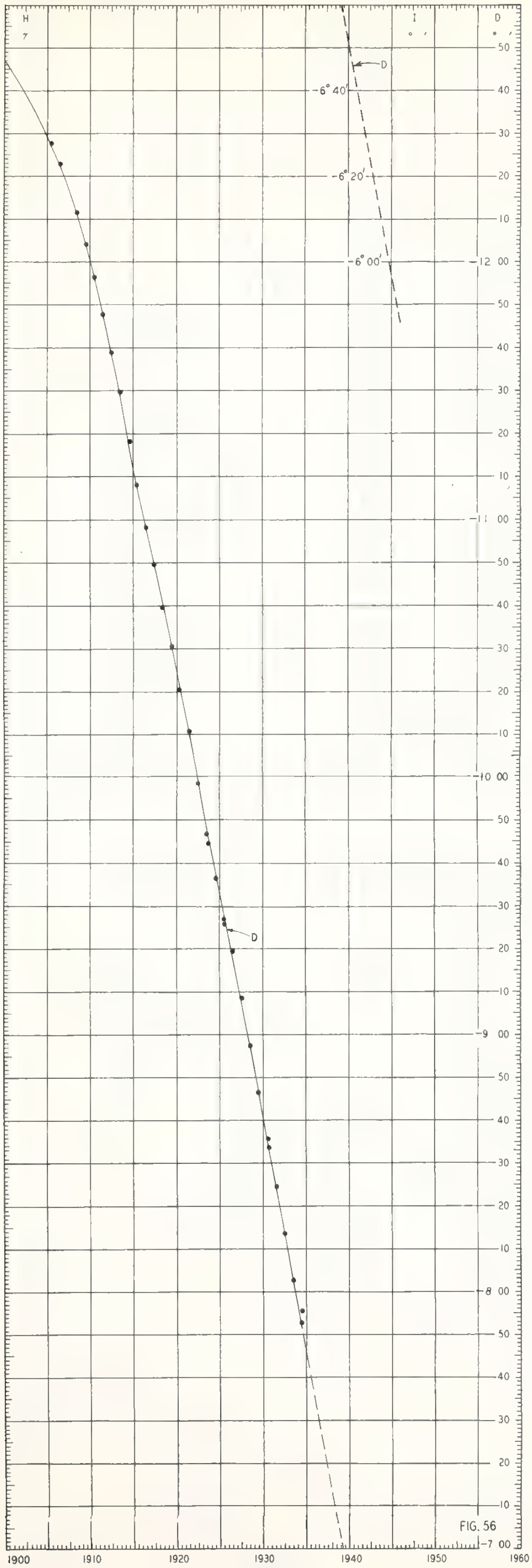


FIG. 56

VALUES OF D, H, AND I

Station ABINGER - GREENWICH Latitude 51° 11′

Country ENGLAND, EUROPE Longitude 359° 37′ E

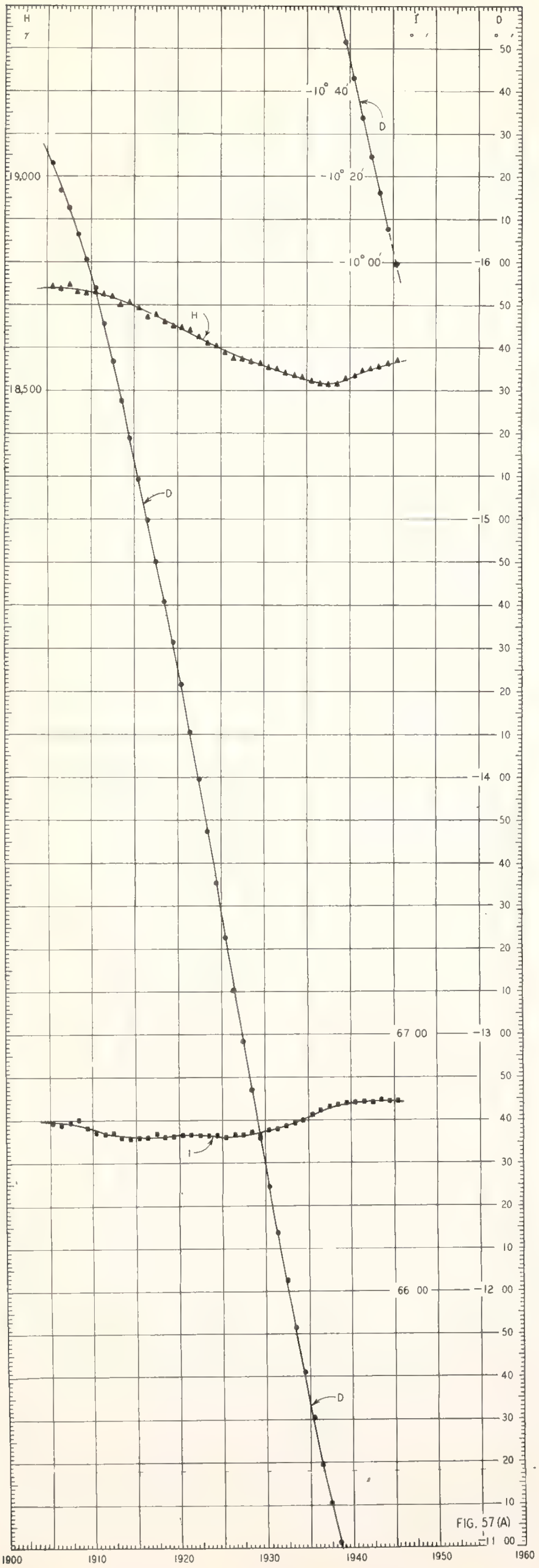


FIG. 57 (A)

VALUES OF X, Y, Z, AND F

Station ABINGER - GREENWICH Latitude 51° 11′

Country ENGLAND, EUROPE Longitude 359° 37′ E

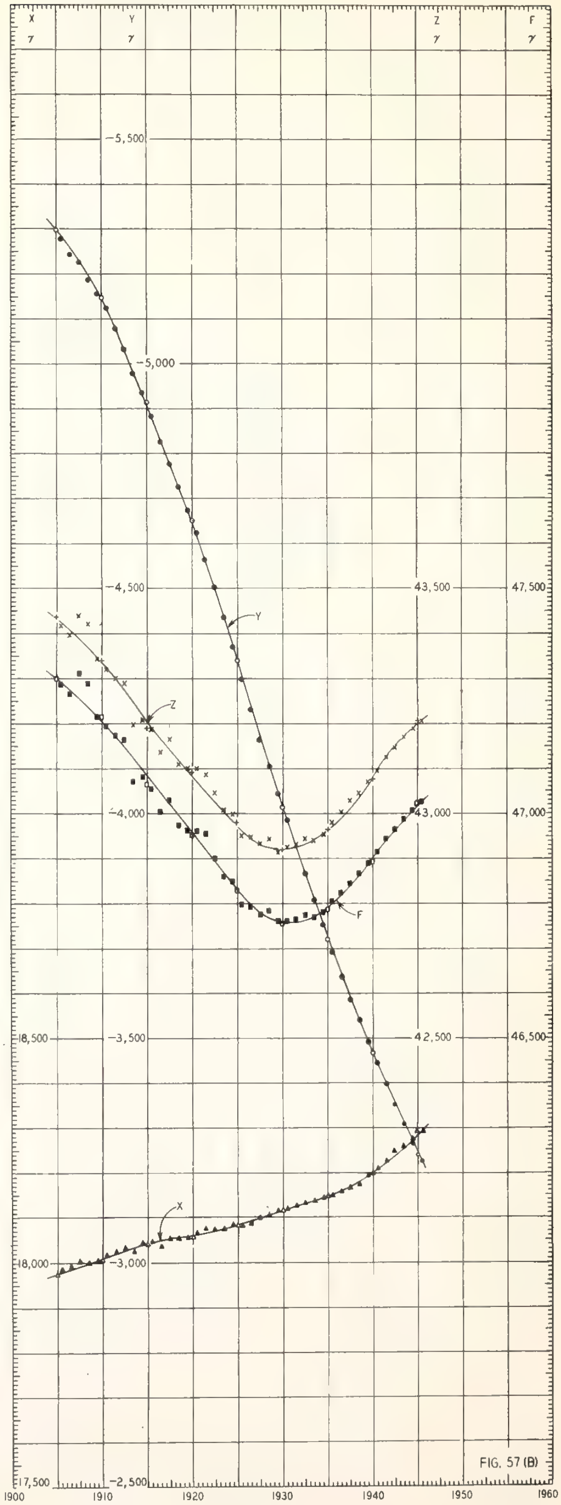


FIG. 57 (B)

VALUES OF D, H, AND I

Station UCCLE (BRUSSELS) Latitude 50° 48′

Country BELGIUM, EUROPE Longitude 04° 21.4′ E

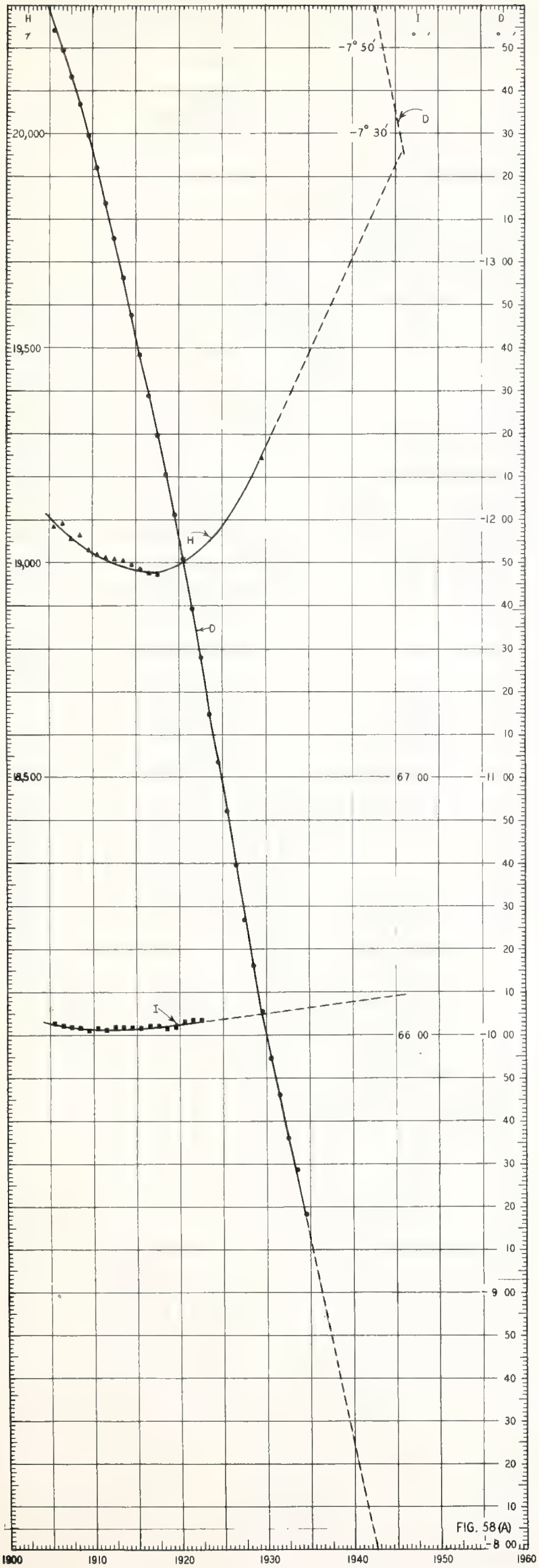


FIG. 58(A)

VALUES OF X, Y, Z, AND F

Station UCCLE (BRUSSELS) Latitude 50° 48′

Country BELGIUM, EUROPE Longitude 04° 21.4′ E

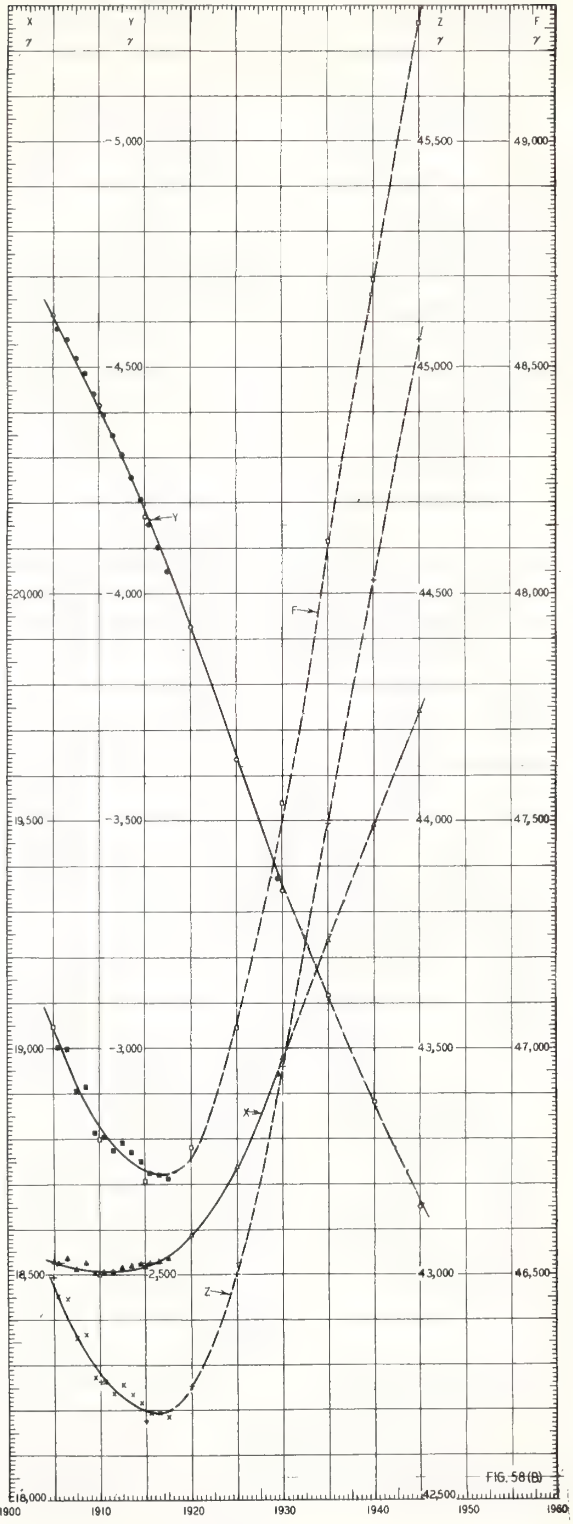


FIG. 58(B)

VALUES OF D, H, AND I

Station HERMSDORF Latitude 50° 46'

Country GERMANY, EUROPE Longitude 16° 14' E

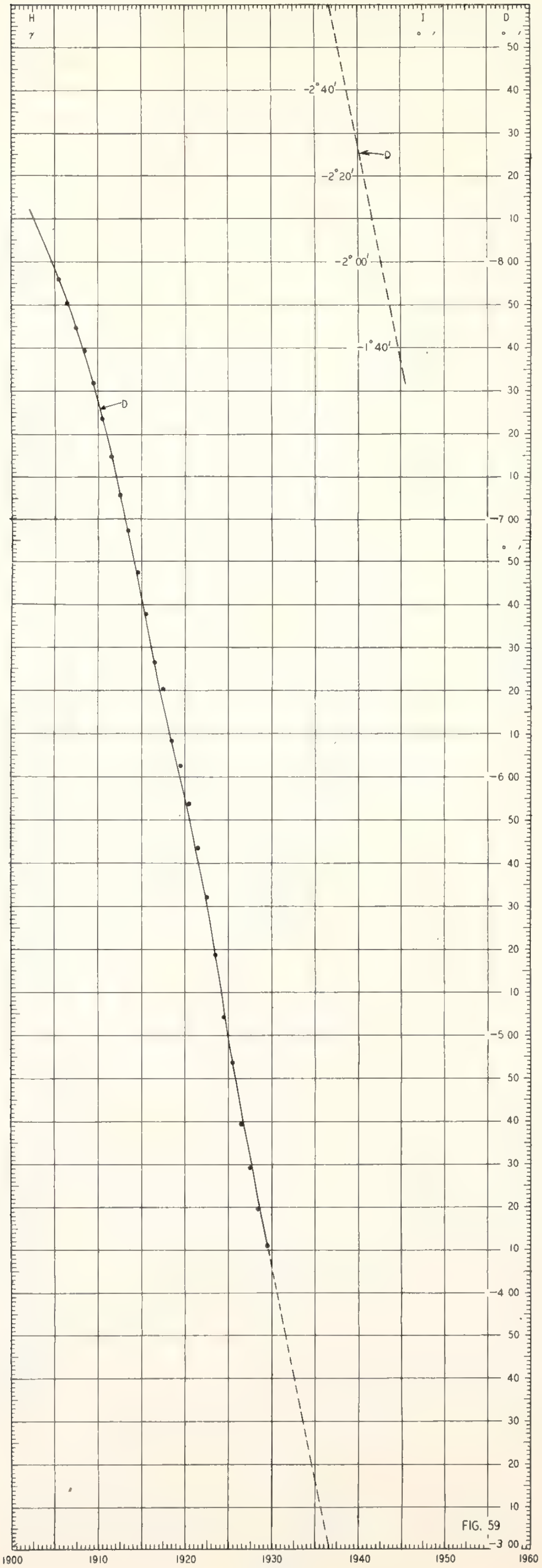


FIG. 59

VALUES OF D, H, AND I

Station FALMOUTH Latitude 50° 09′

Country ENGLAND, EUROPE Longitude 354 55 E

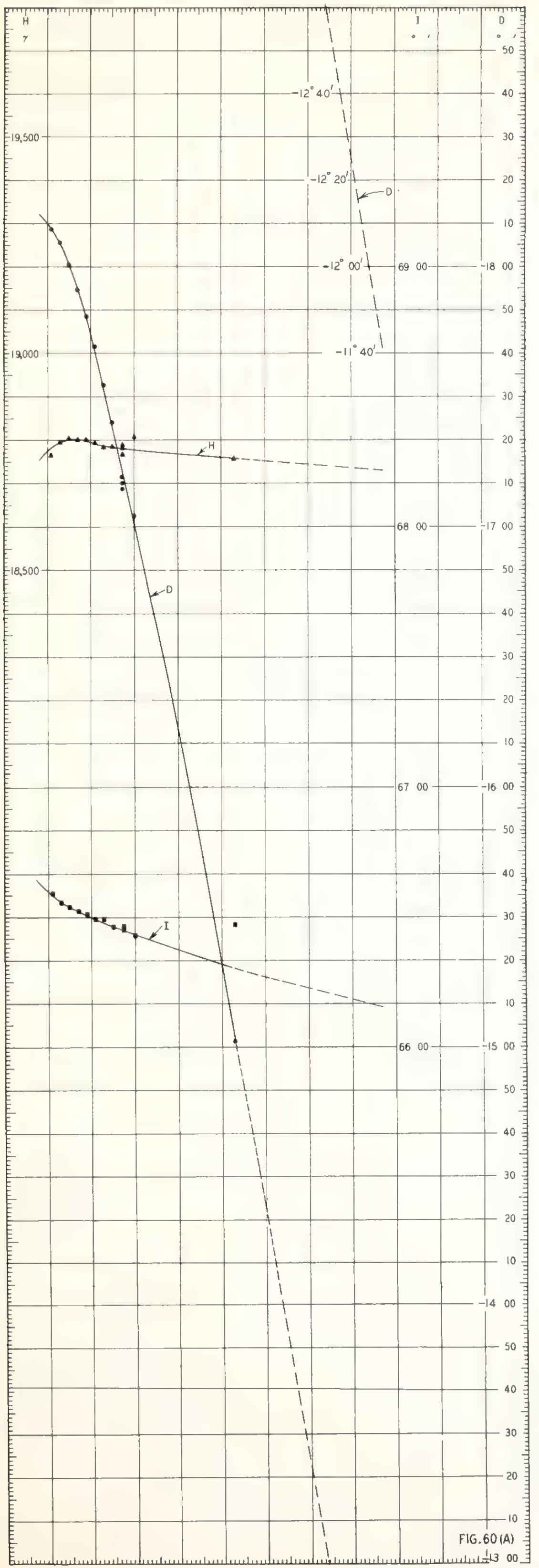


FIG. 60 (A)

VALUES OF X, Y, Z, AND F

Station FALMOUTH Latitude 50° 09′

Country ENGLAND, EUROPE Longitude 354 55 E

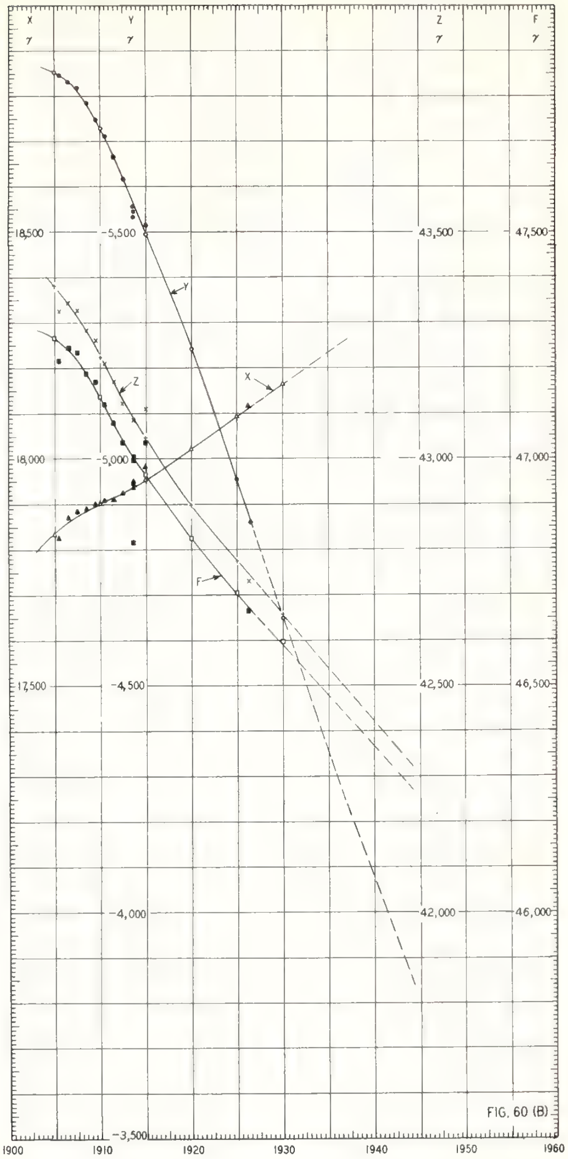


FIG. 60 (B)

VALUES OF D, H, AND I

Station BEUTHEN-MIKILOW - BEUTHEN Latitude 50° 09′
Country GERMANY, EUROPE Longitude 18° 54′ E

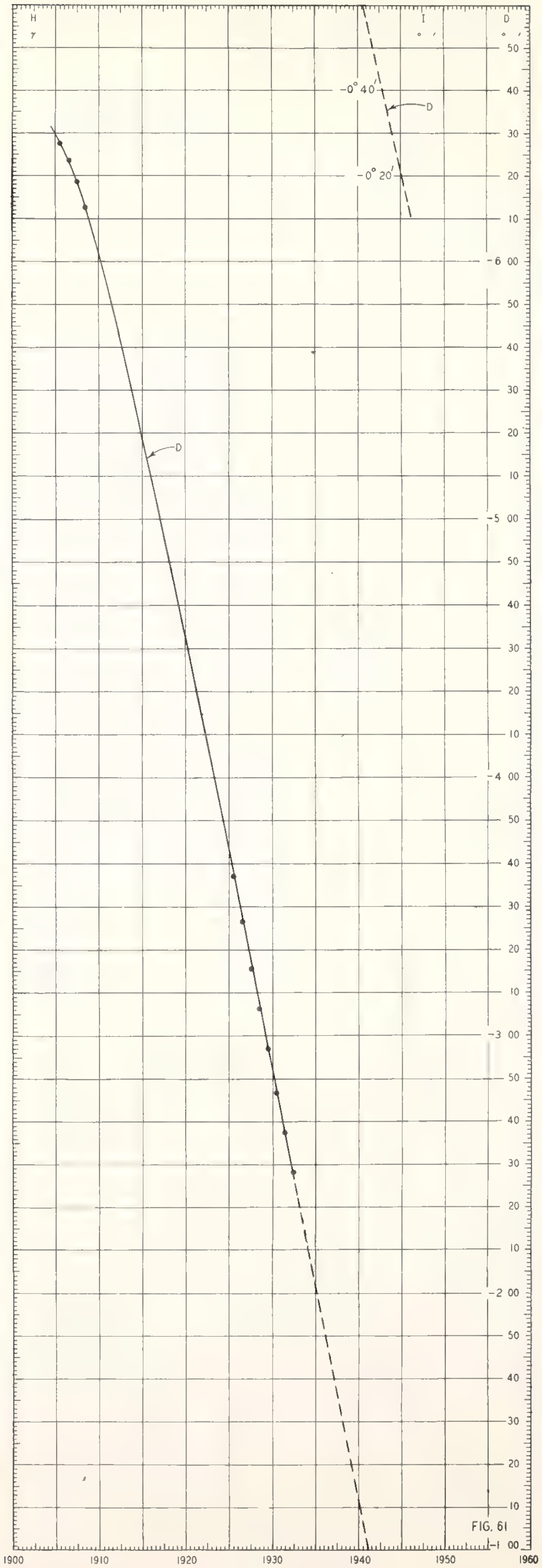


FIG. 61

VALUES OF D, H, AND I

Station *PRAGUE* Latitude *50° 05′*
Country *CZECKOSLOVAKIA, EUROPE* Longitude *14° 25′ E*

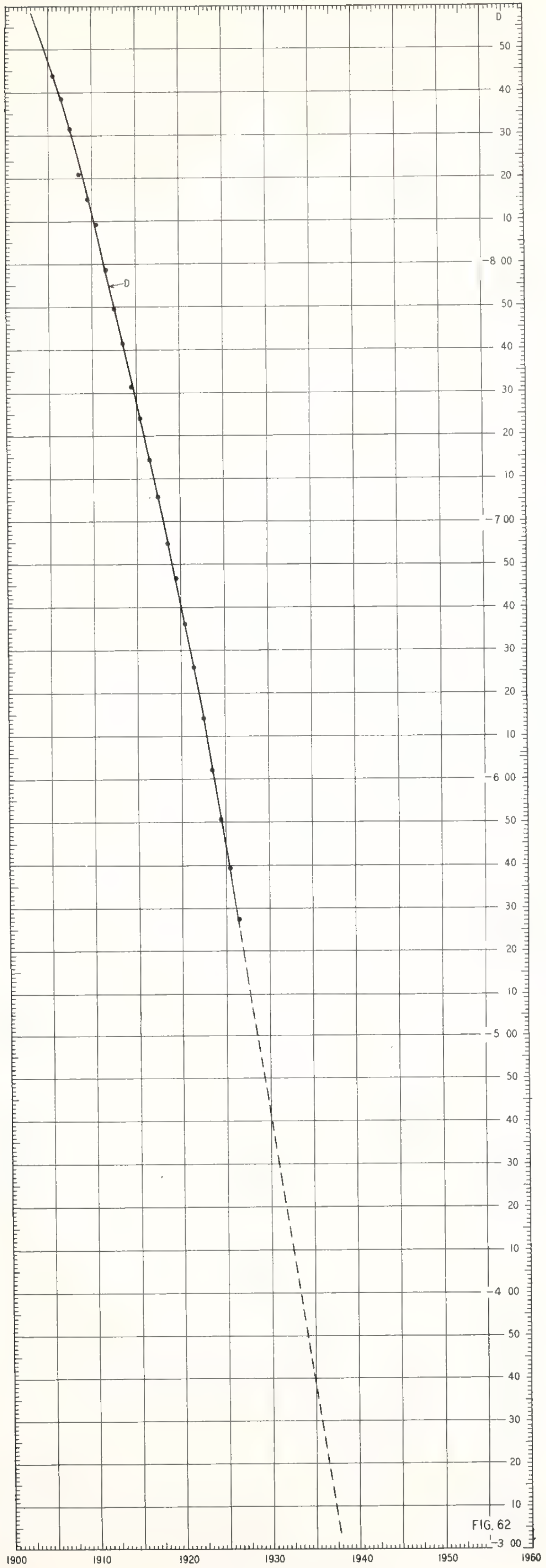


FIG. 62

VALUES OF D, H, AND I

Station CRACOW Latitude 50° 04′

Country POLAND, EUROPE Longitude 19° 58′ E

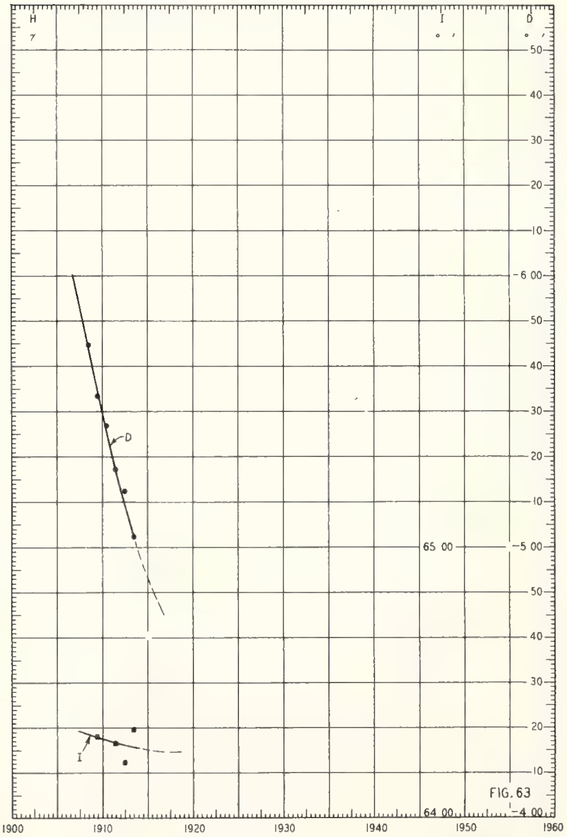


FIG. 63

VALUES OF D, H, AND I

Station JANÓW Latitude 49° 54′

Country POLAND, EUROPE Longitude 23° 44′ E

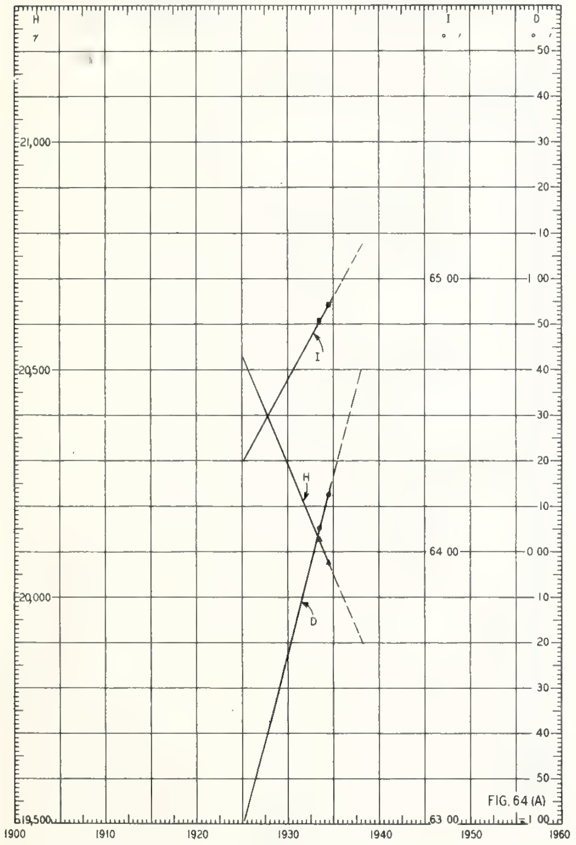


FIG. 64 (A)

VALUES OF X, Y, Z, AND F

Station JANÓW Latitude 49° 54′

Country POLAND, EUROPE Longitude 23° 44′ E

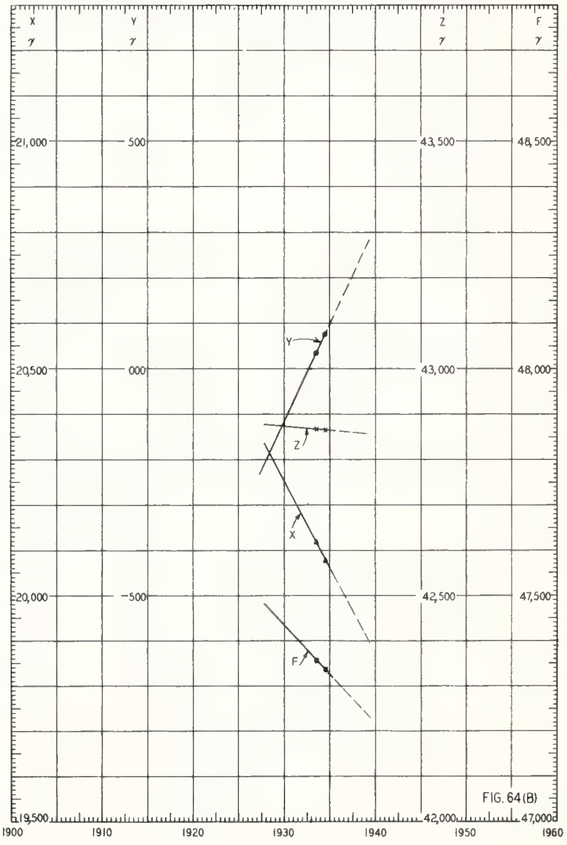


FIG. 64 (B)

VALUES OF D, H, AND I

Station *ST. HELIER (JERSEY)* Latitude *49° 12′*

Country *CHANNEL ISLANDS, EUROPE* Longitude *357° 55′ E*

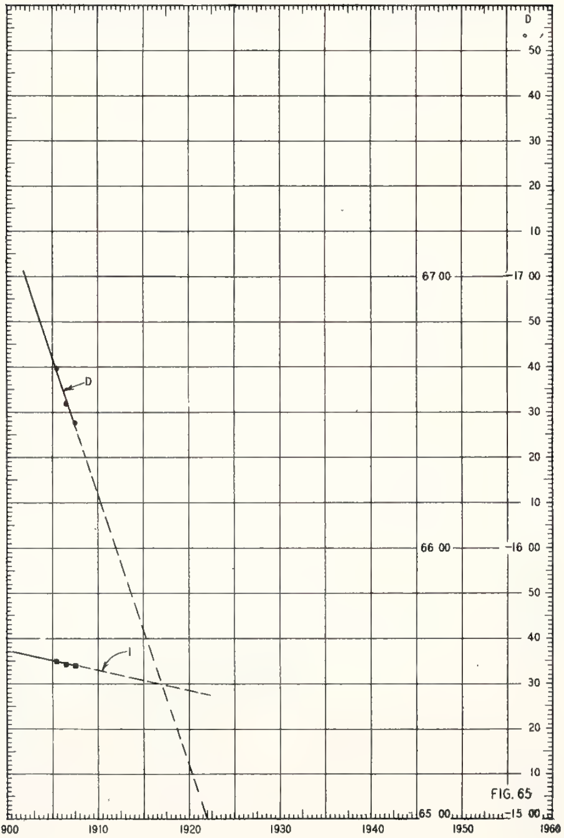


FIG. 65

VALUES OF D, H, AND I

Station *VAL JOYEUX – CHAMBON-LA-FORÊT* Latitude *48° 49′*
Country *FRANCE, EUROPE* Longitude *02° 01′ E*

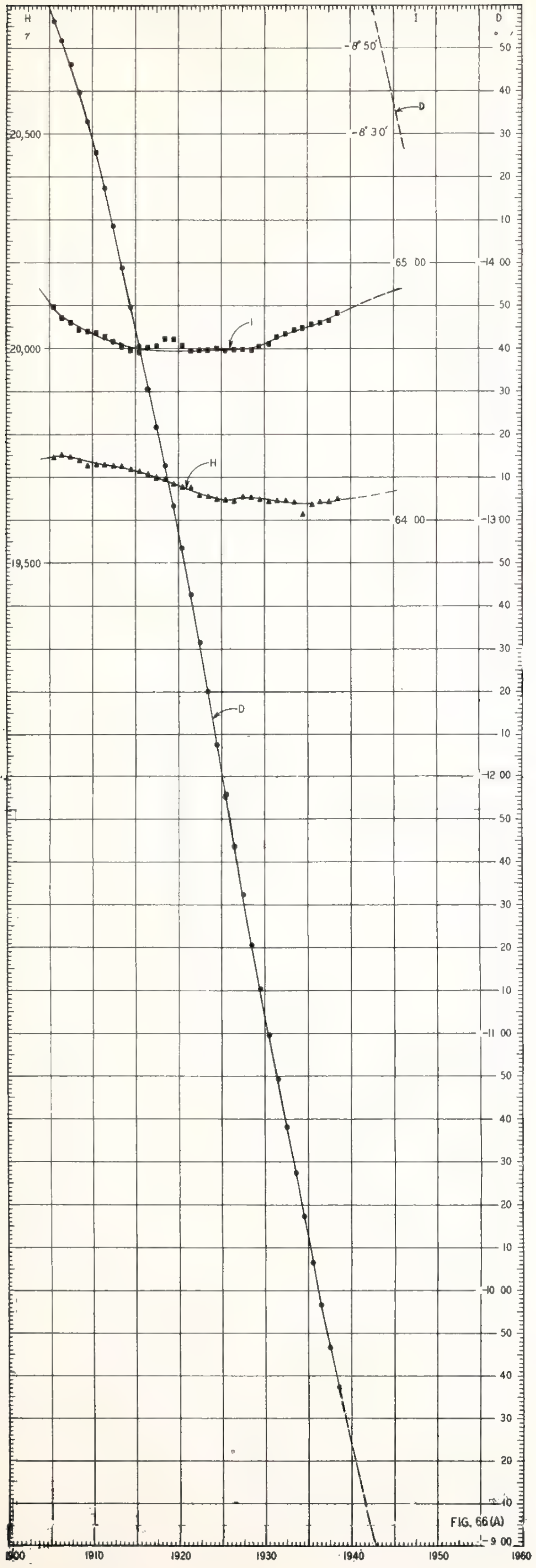


FIG. 66 (A)

VALUES OF X, Y, Z, AND F

Station *VAL JOYEUX – CHAMBON-LA-FORÊT* Latitude *48° 49′*
Country *FRANCE, EUROPE* Longitude *02° 01′ E*

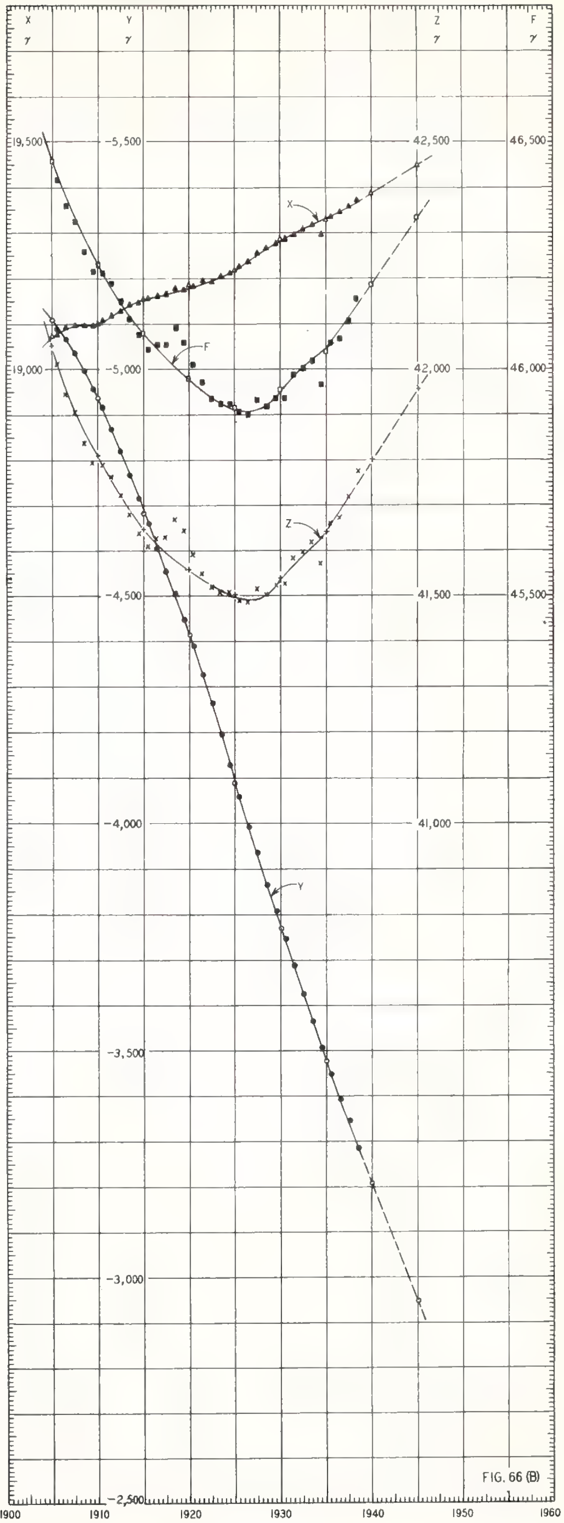


FIG. 66 (B)

VALUES OF D, H, AND I

Station *VIENNA (AUHOF)* Latitude *48° 12′*
Country *AUSTRIA, EUROPE* Longitude *16° 14′ E*

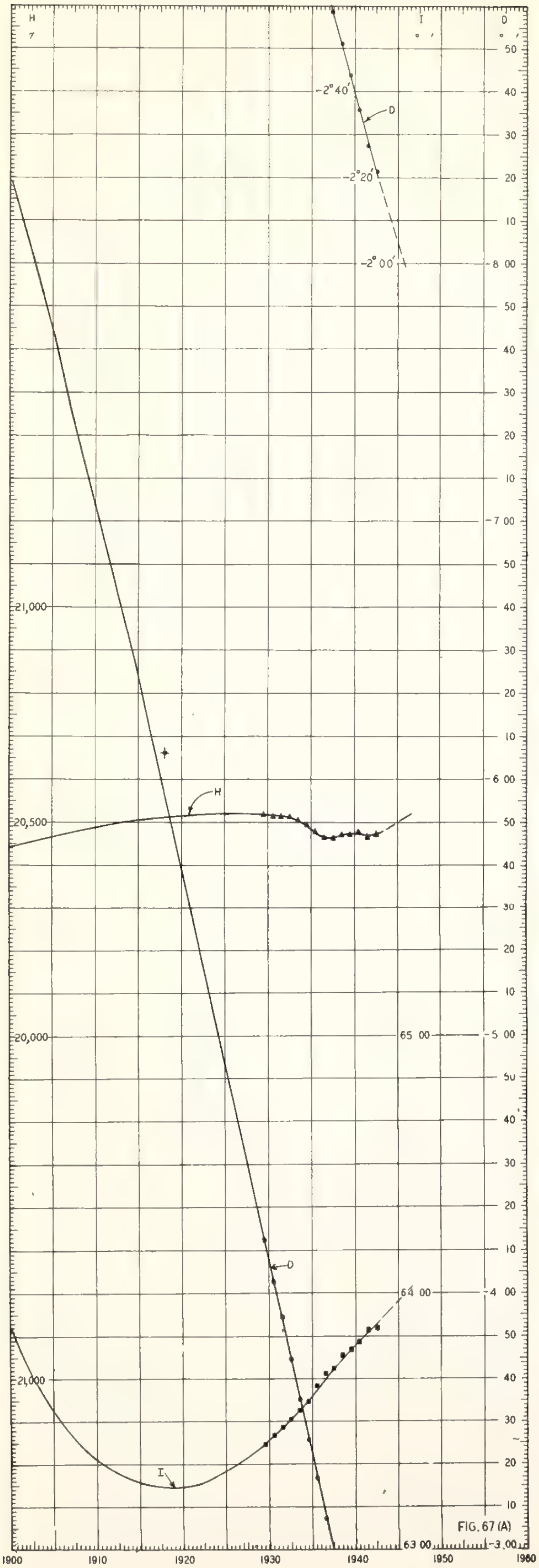


FIG. 67 (A)

VALUES OF X, Y, Z, AND F

Station *VIENNA (AUHOF)* Latitude *48° 12′*
Country *AUSTRIA, EUROPE* Longitude *16° 14′ E*

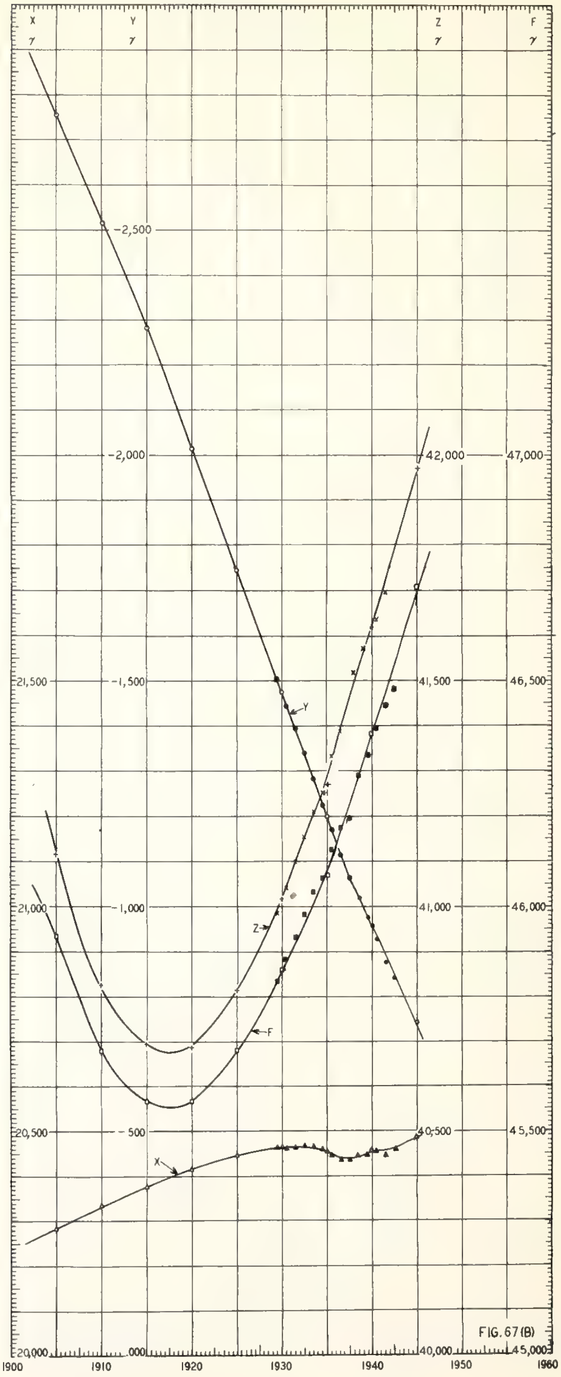


FIG. 67 (B)

VALUES OF D, H, AND I

Station MUNICH - MAISACH Latitude 48° 09′

Country GERMANY, EUROPE Longitude 11° 37′ E

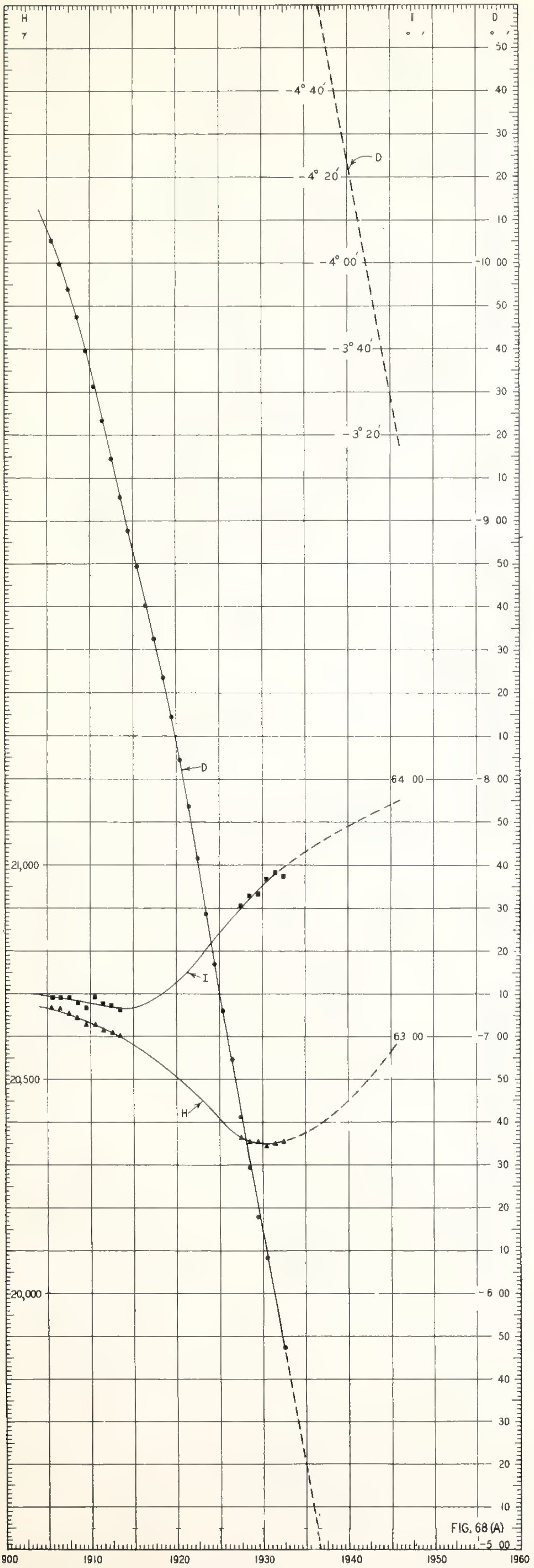


FIG. 68 (A)

VALUES OF X, Y, Z, AND F

Station MUNICH - MAISACH Latitude 48° 09′

Country GERMANY, EUROPE Longitude 11° 37′ E

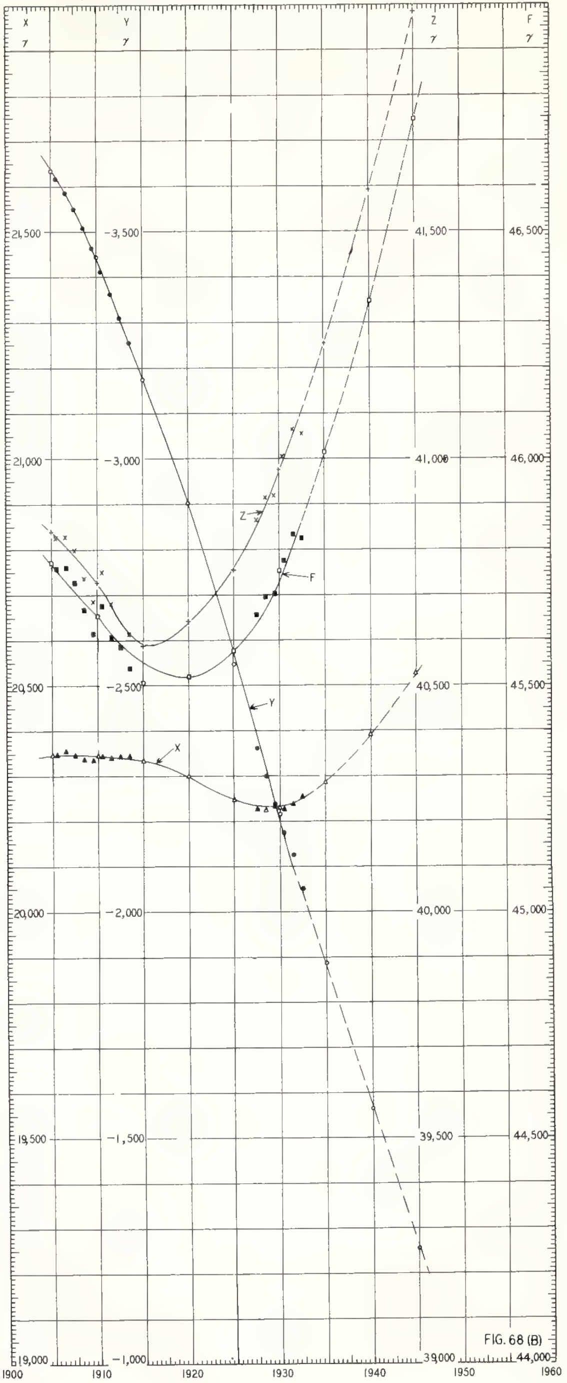


FIG. 68 (B)

VALUES OF D, H, AND I

Station O'GYALLA (PESTH)-O'GYALLA (STARÁ ĎALA) Latitude 47° 53'

Country CZECHOSLOVAKIA, EUROPE Longitude 18° 12' E

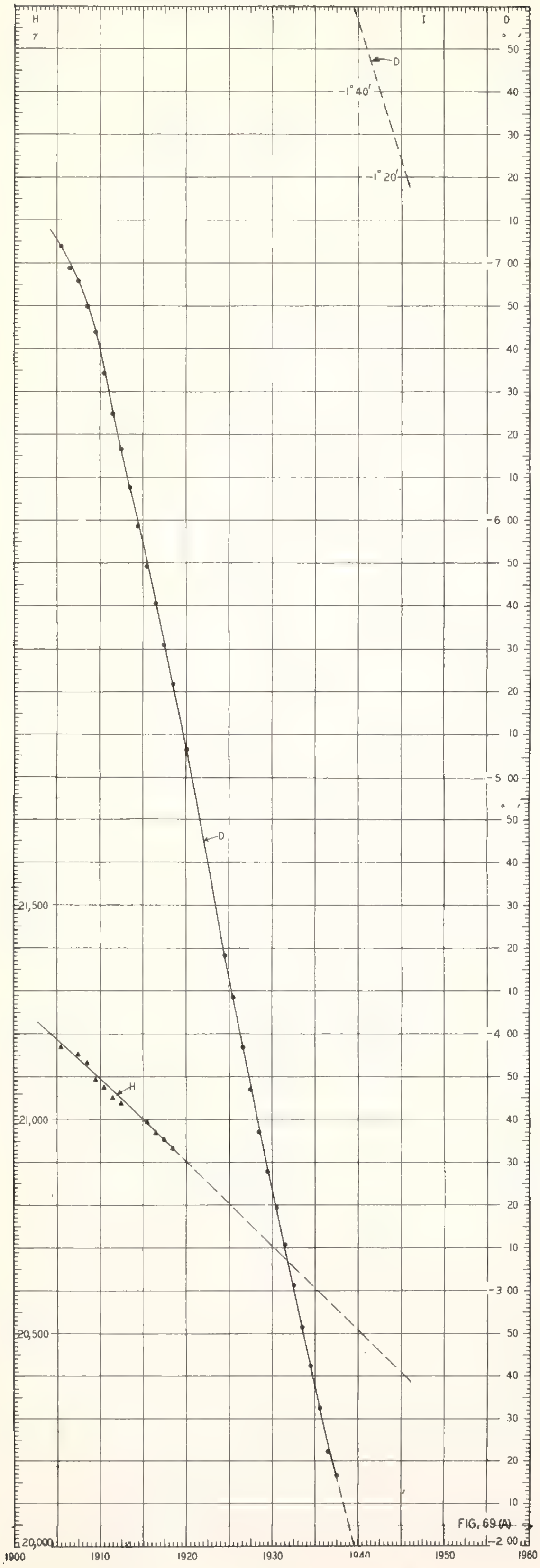


FIG. 69 (A)

VALUES OF X, Y, Z, AND F

Station O'GYALLA (PESTH)-O'GYALLA (STARÁ ĎALA) Latitude 47° 53'

Country CZECHOSLOVAKIA, EUROPE Longitude 18° 12' E

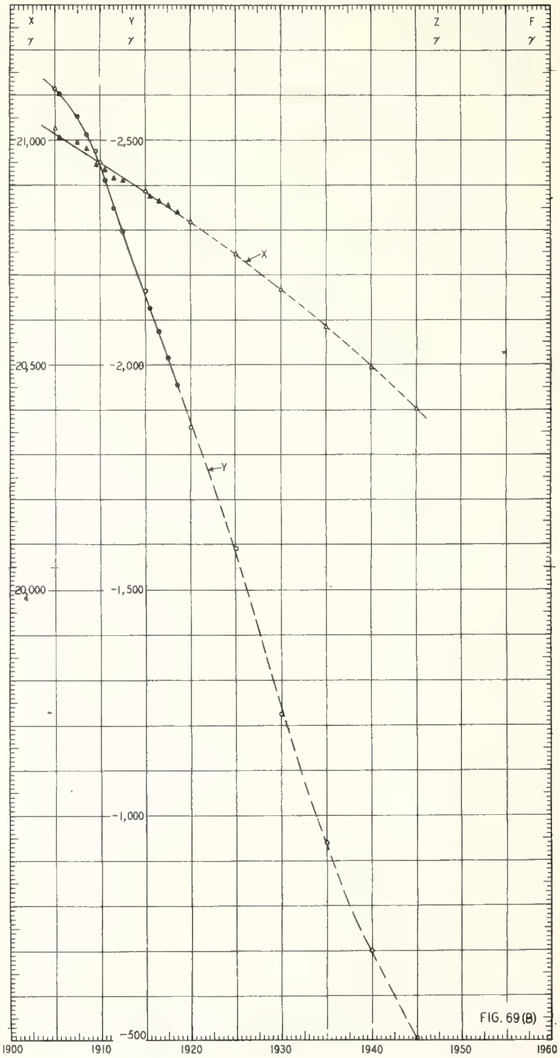


FIG. 69 (B)

VALUES OF D, H, AND I

Station NANTES Latitude 47° 15′

Country FRANCE, EUROPE Longitude 358° 26′ E

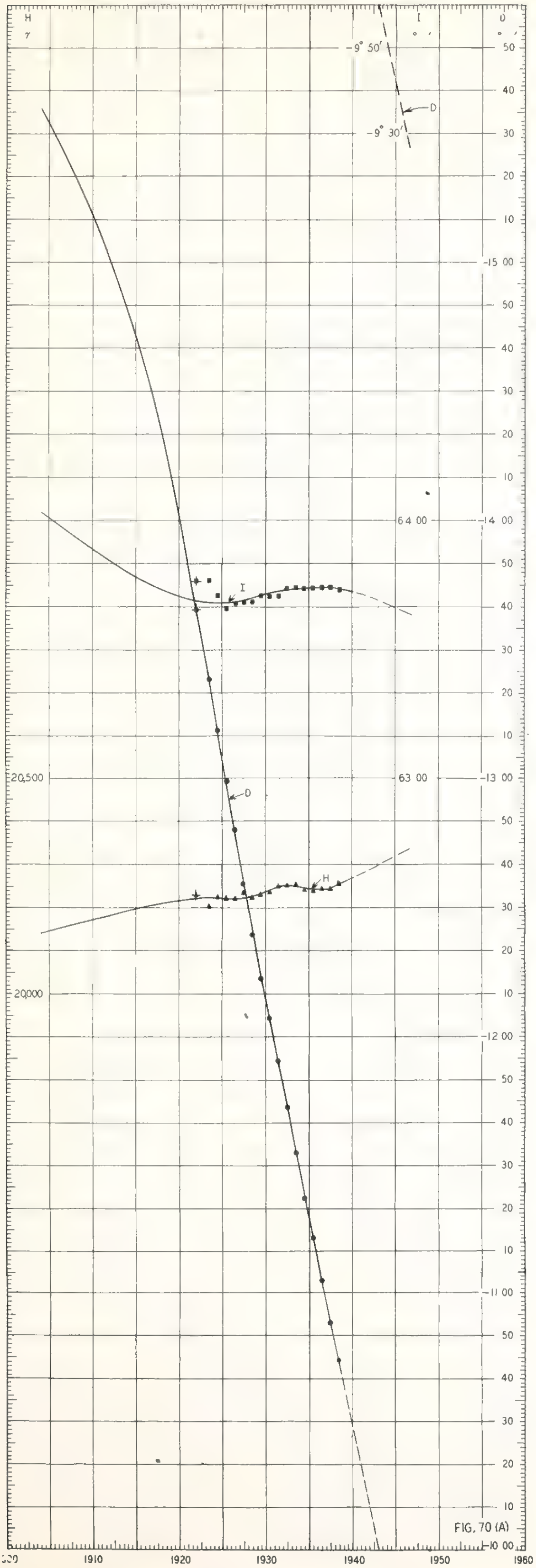


FIG. 70 (A)

VALUES OF X, Y, Z, AND F

Station NANTES Latitude 47° 15′

Country FRANCE, EUROPE Longitude 358° 26′ E

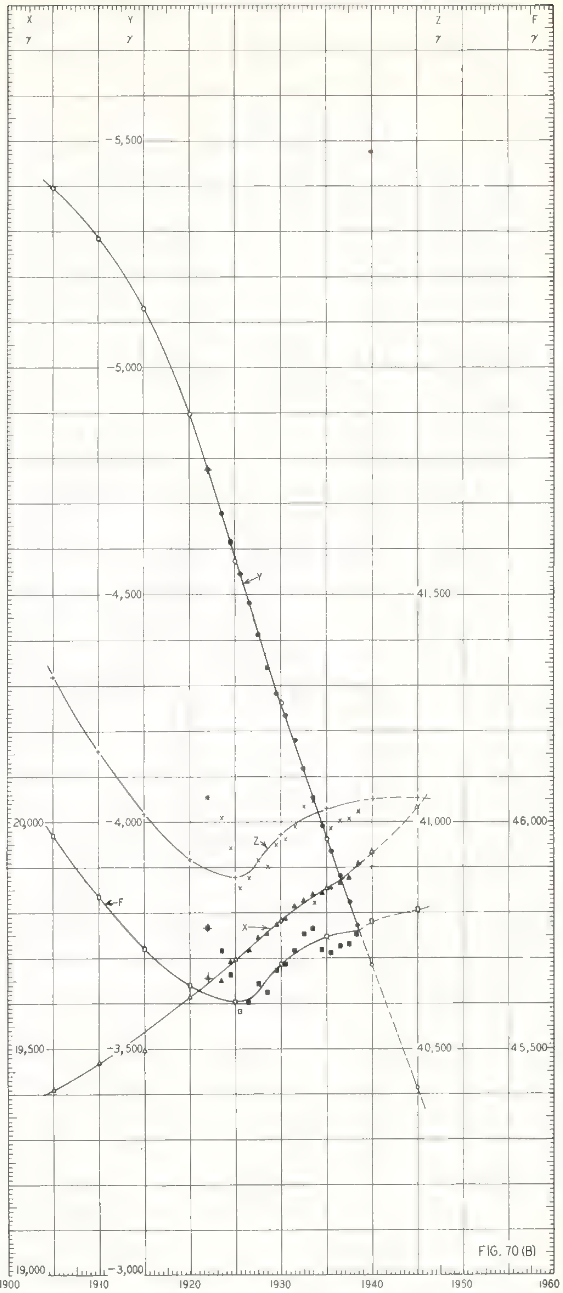


FIG. 70 (B)

VALUES OF D, H, AND I

Station *ODESSA* Latitude *46° 26'*

Country *RUSSIA, EUROPE* Longitude *30° 46' E*

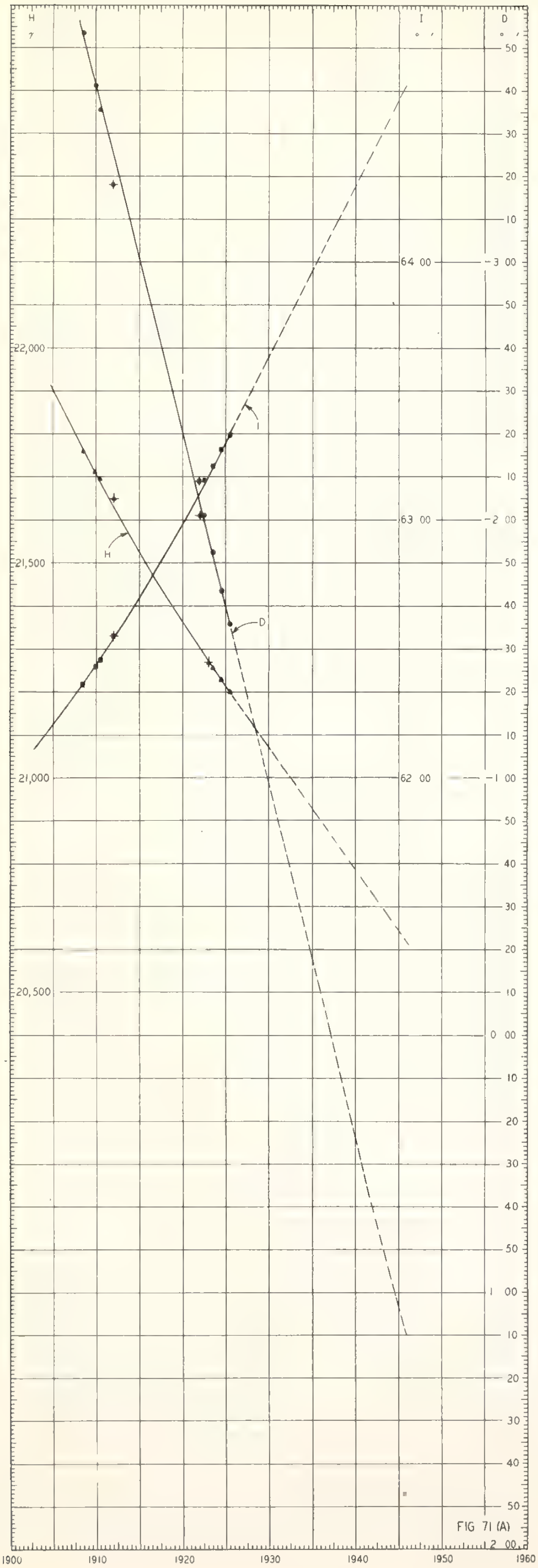


FIG 71 (A)

VALUES OF X, Y, Z, AND F

Station *ODESSA* Latitude *46° 26'*

Country *RUSSIA, EUROPE* Longitude *30° 46' E*

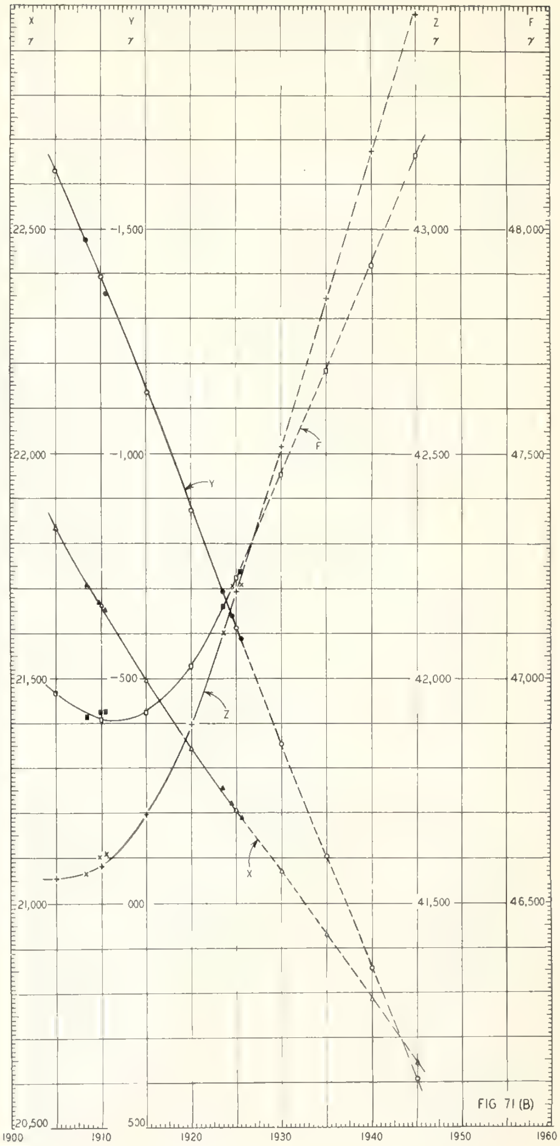


FIG 71 (B)

VALUES OF D, H, AND I

Station POLA Latitude 44° 52′
Country ITALY, EUROPE Longitude 13° 51′ E

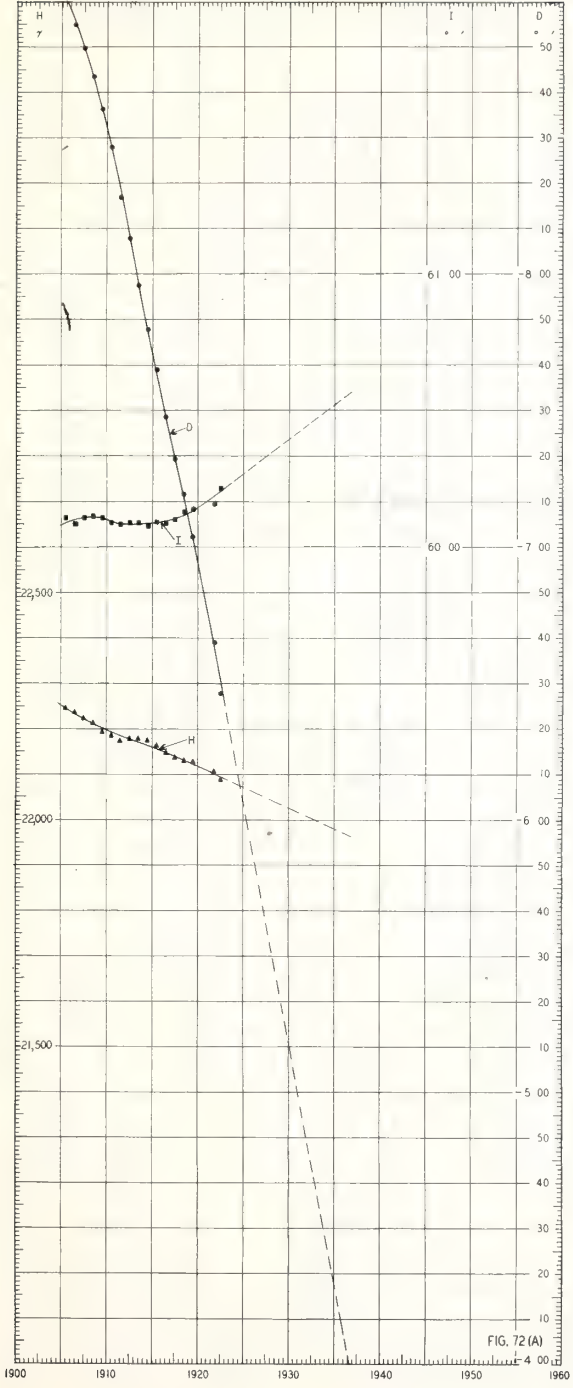


FIG. 72 (A)

VALUES OF X, Y, Z, AND F

Station POLA Latitude 44° 52′
Country ITALY, EUROPE Longitude 13° 51′ E

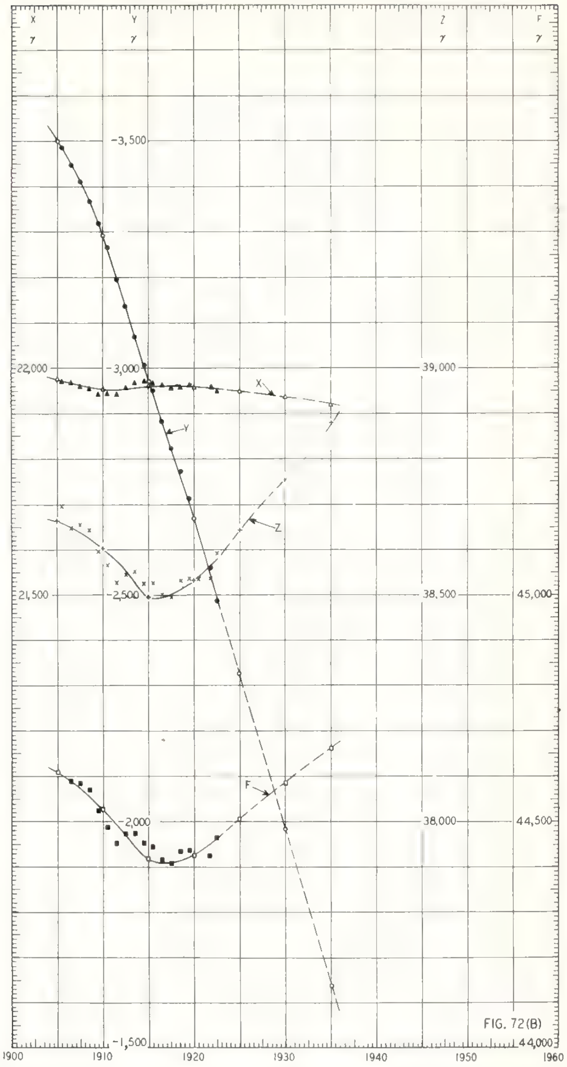


FIG. 72 (B)

VALUES OF D, H, AND I

Station *PERPIGNAN* Latitude *42° 42'*
Country *FRANCE, EUROPE* Longitude *02° 53' E*

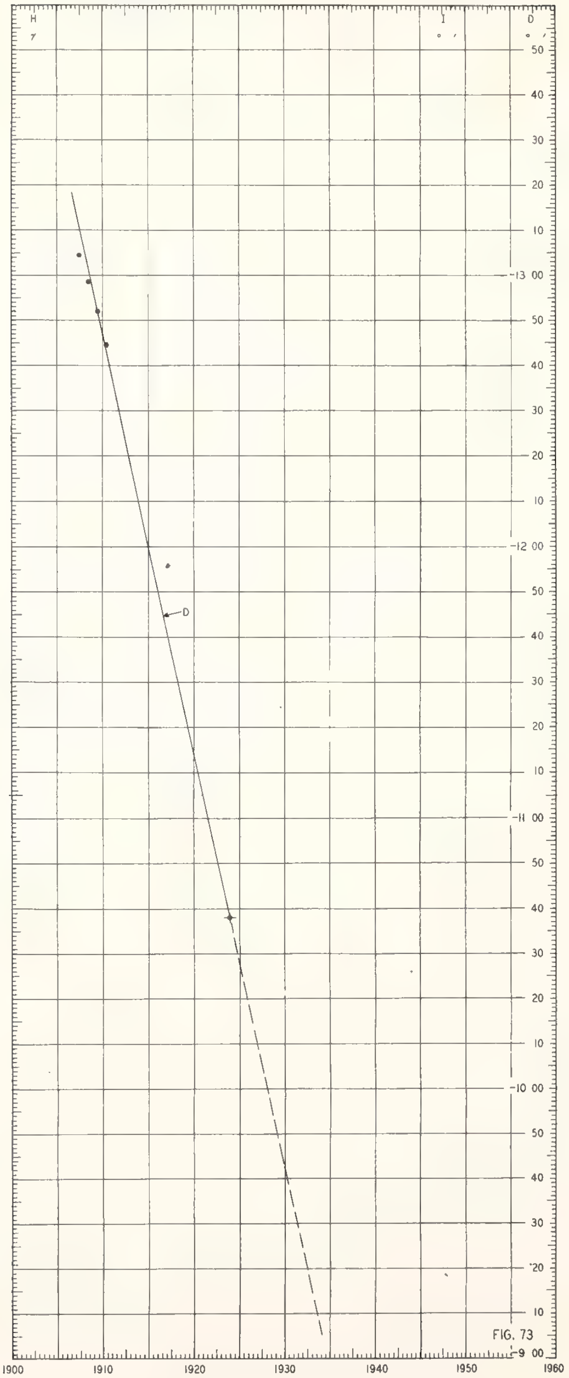


FIG. 73

VALUES OF D, H, AND I

Station KARSANI – DUSHETI – TIFLIS   Latitude 41° 50′
Country RUSSIA, EUROPE   Longitude 44° 42′ E

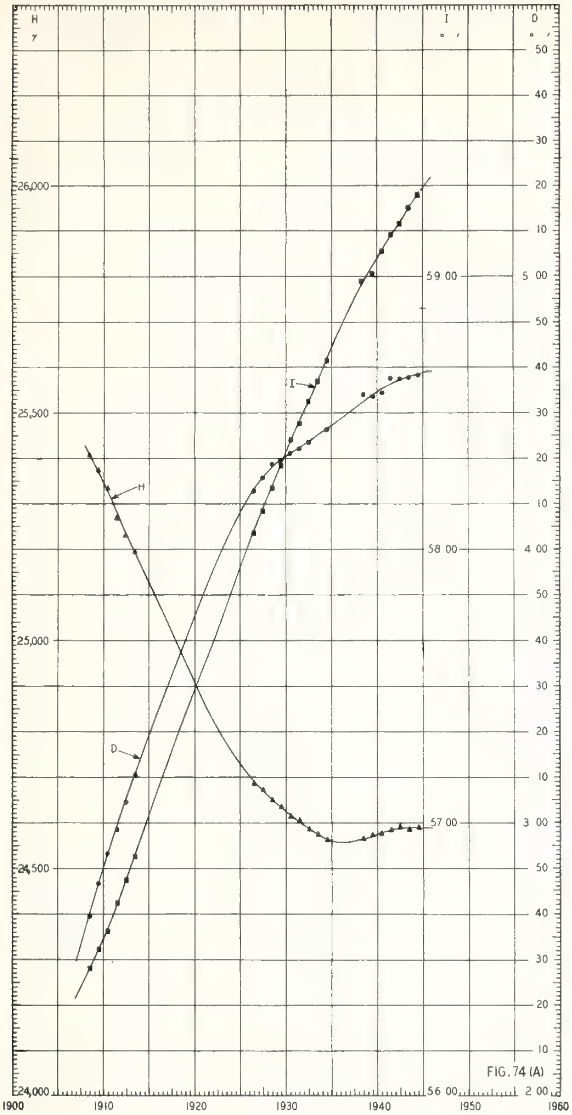


FIG. 74 (A)

VALUES OF X, Y, Z, AND F

Station KARSANI – DUSHETI – TIFLIS   Latitude 41° 50′
Country RUSSIA, EUROPE   Longitude 44° 42′ E

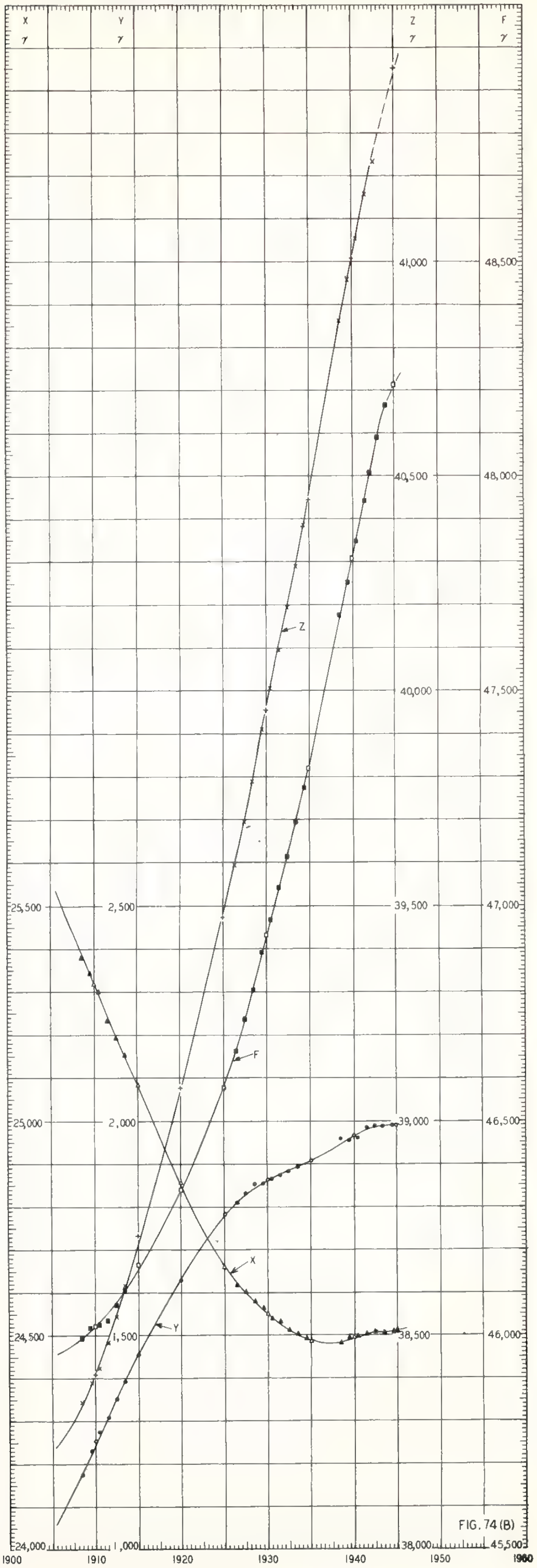


FIG. 74 (B)

VALUES OF D, H, AND I

Station CAPODIMONTE Latitude 40° 52′

Country ITALY, EUROPE Longitude 14° 15′ E

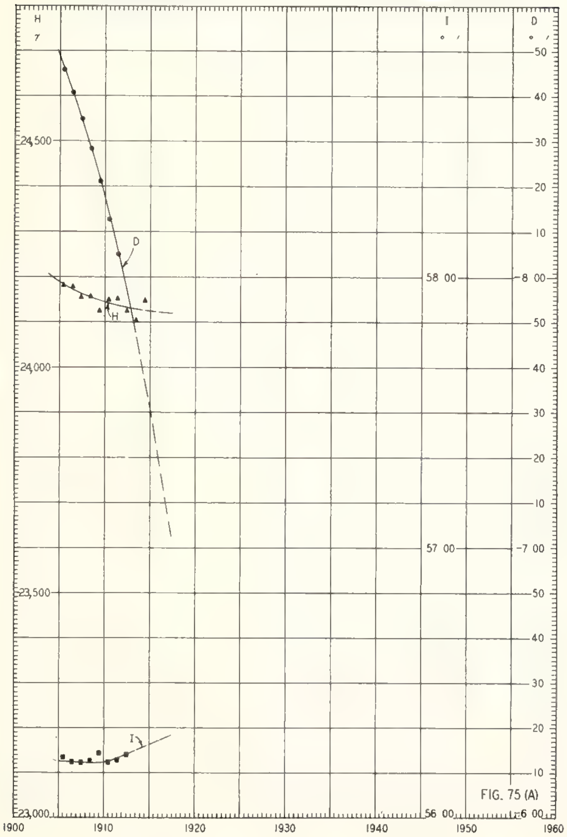


FIG. 75 (A)

VALUES OF X, Y, Z, AND F

Station CAPODIMONTE Latitude 40° 52′

Country ITALY, EUROPE Longitude 14° 15′ E

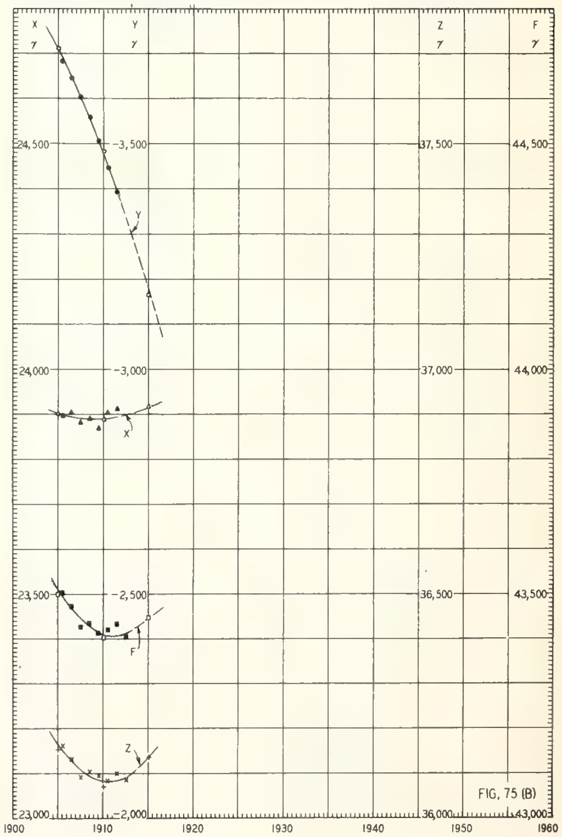


FIG. 75 (B)

VALUES OF D, H, AND I

Station EBRO (TORTOSA) Latitude 40° 49'
Country SPAIN, EUROPE Longitude 00° 31' E

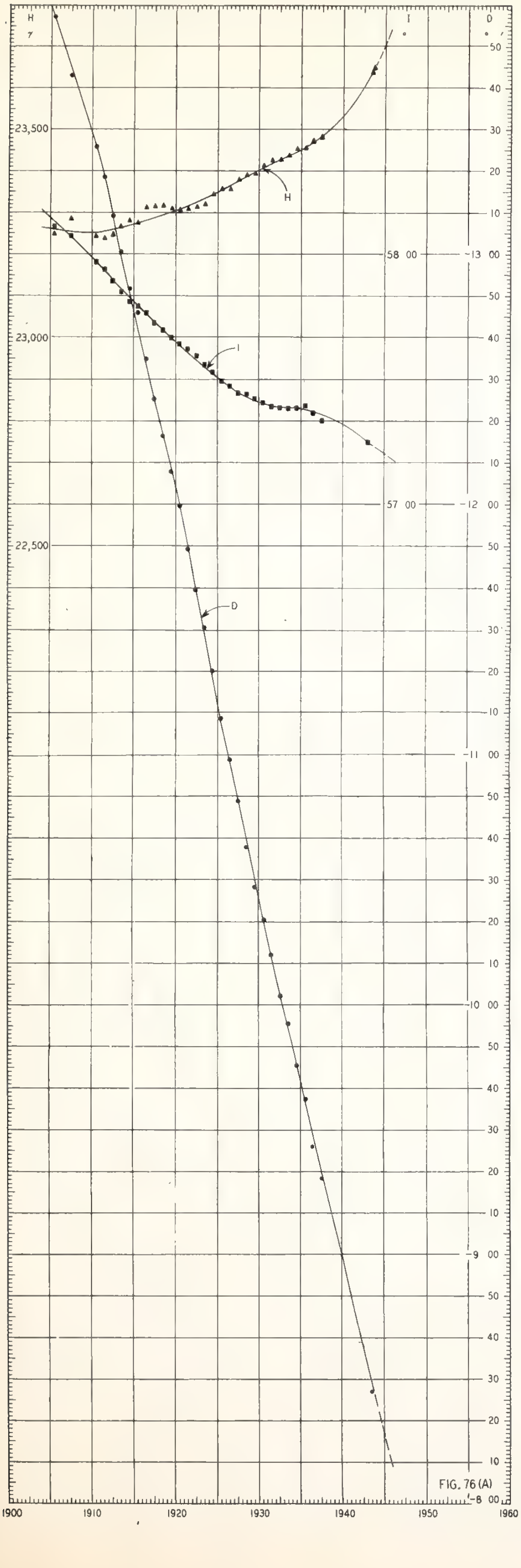


FIG. 76 (A)

VALUES OF X, Y, Z, AND F

Station EBRO (TORTOSA) Latitude 40° 49'
Country SPAIN, EUROPE Longitude 00° 31' E

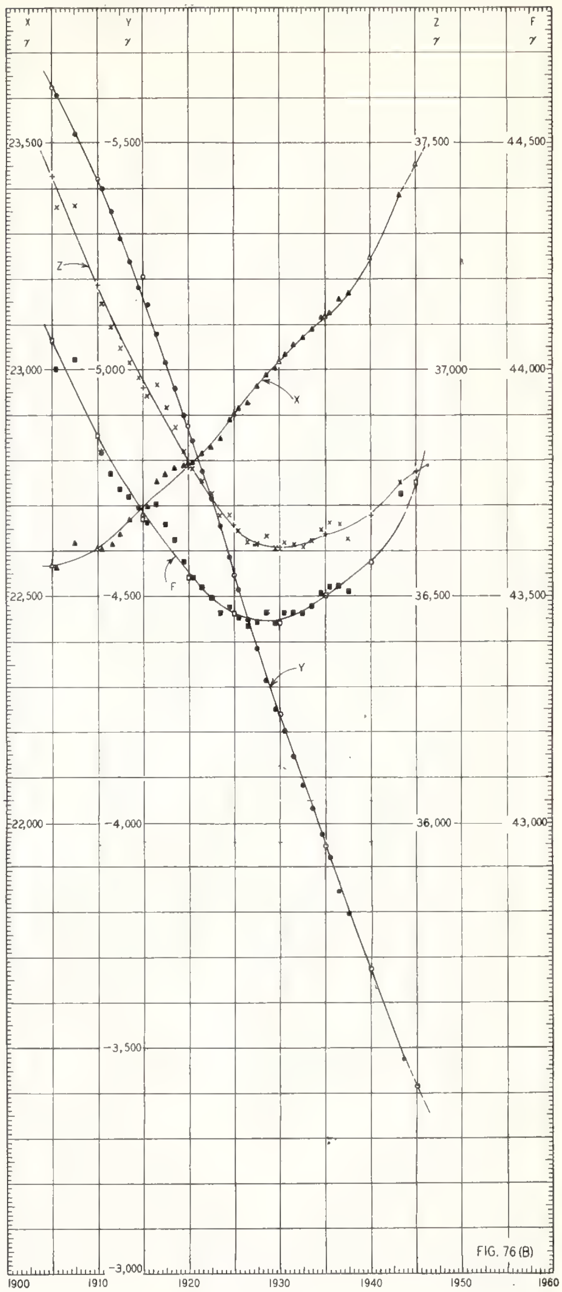


FIG. 76 (B)

UES OF D, H, AND I

Latitude 40° 12.4'

EUROPE Longitude 351° 35' E

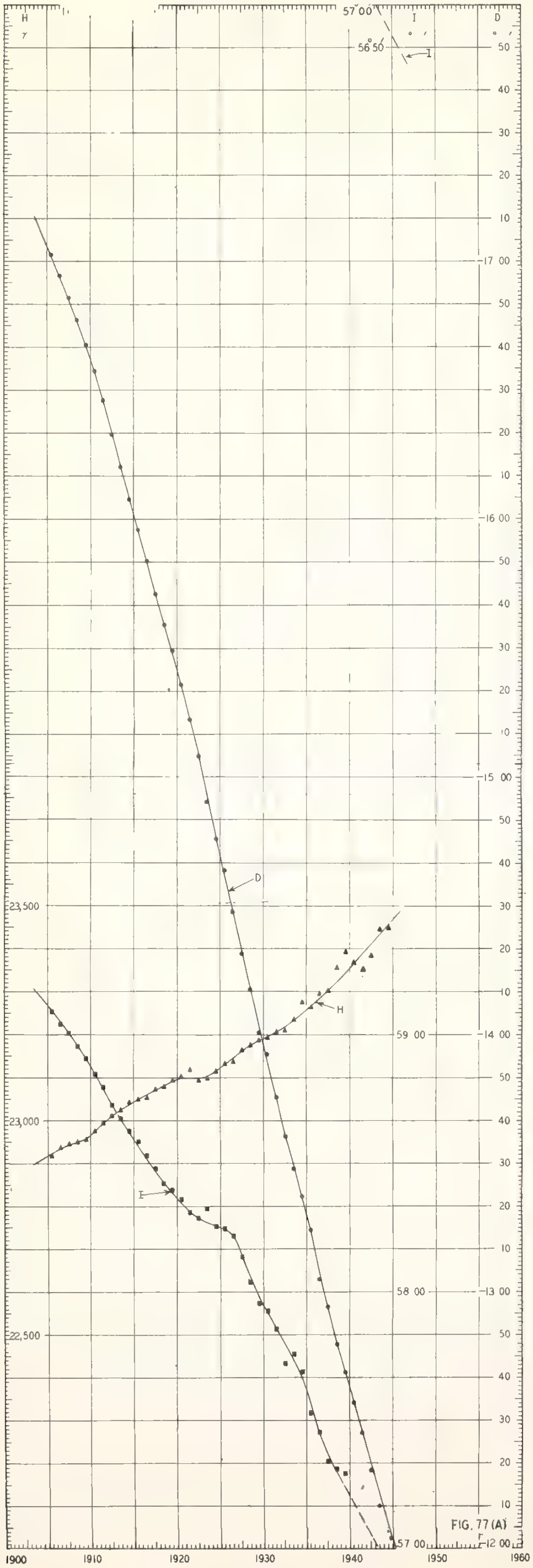


FIG. 77 (A)

VALUES OF X, Y, Z, AND F

Station COIMBRA Latitude 40° 12.4'

Country PORTUGAL, EUROPE Longitude 351° 35' E

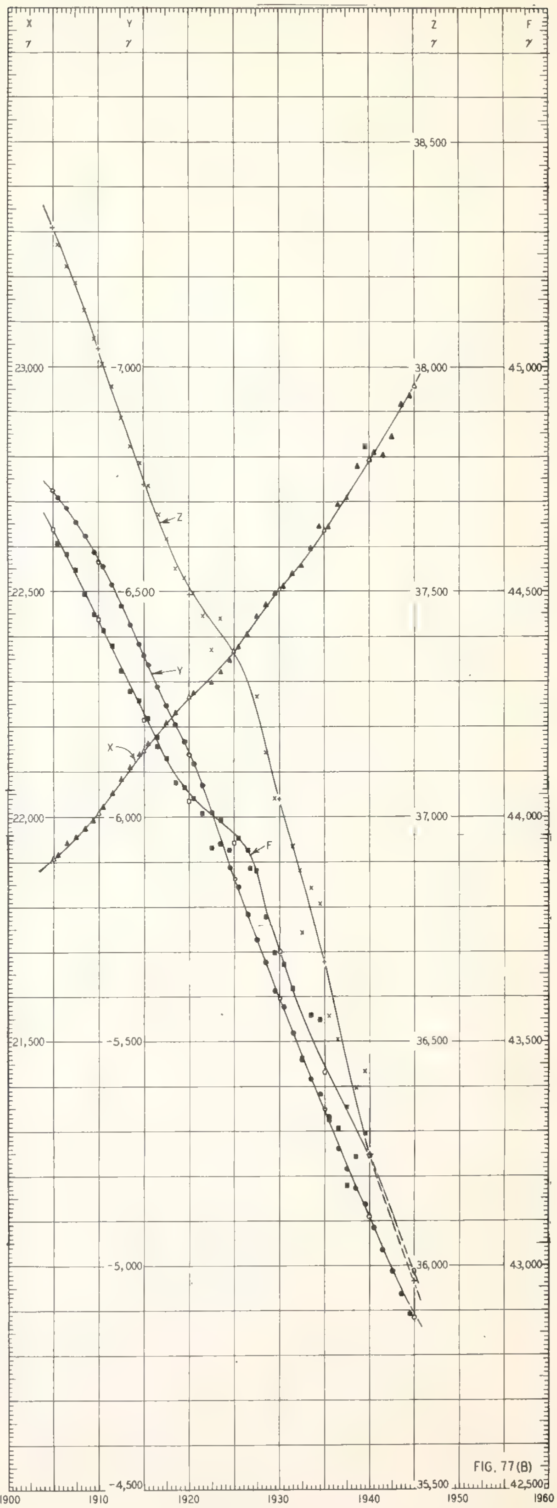


FIG. 77 (B)

VALUES OF D, H, AND I

Station ATHENS Latitude 37° 59′

Country GREECE, EUROPE Longitude 23° 42′ E

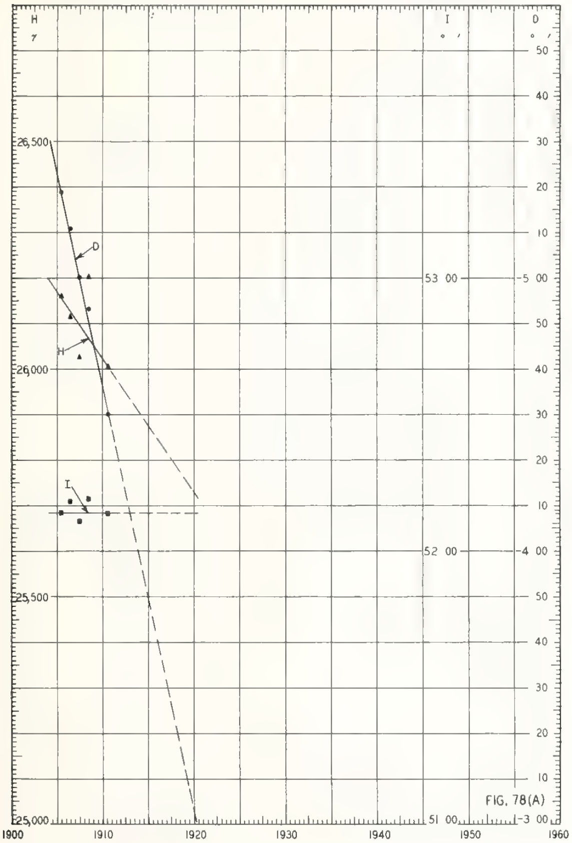


FIG. 78(A)

VALUES OF X, Y, Z, AND F

Station ATHENS Latitude 37° 59′

Country GREECE, EUROPE Longitude 23° 42′ E

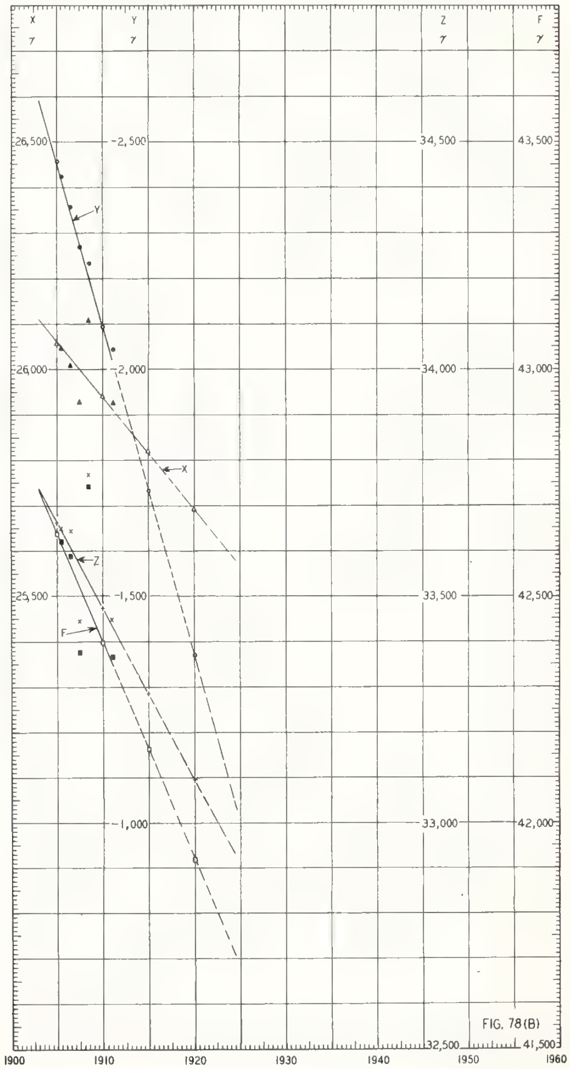


FIG. 78(B)

VALUES OF D, H, AND I

Station SAN FERNANDO Latitude 36° 28'

Country SPAIN, EUROPE Longitude 353° 48' E

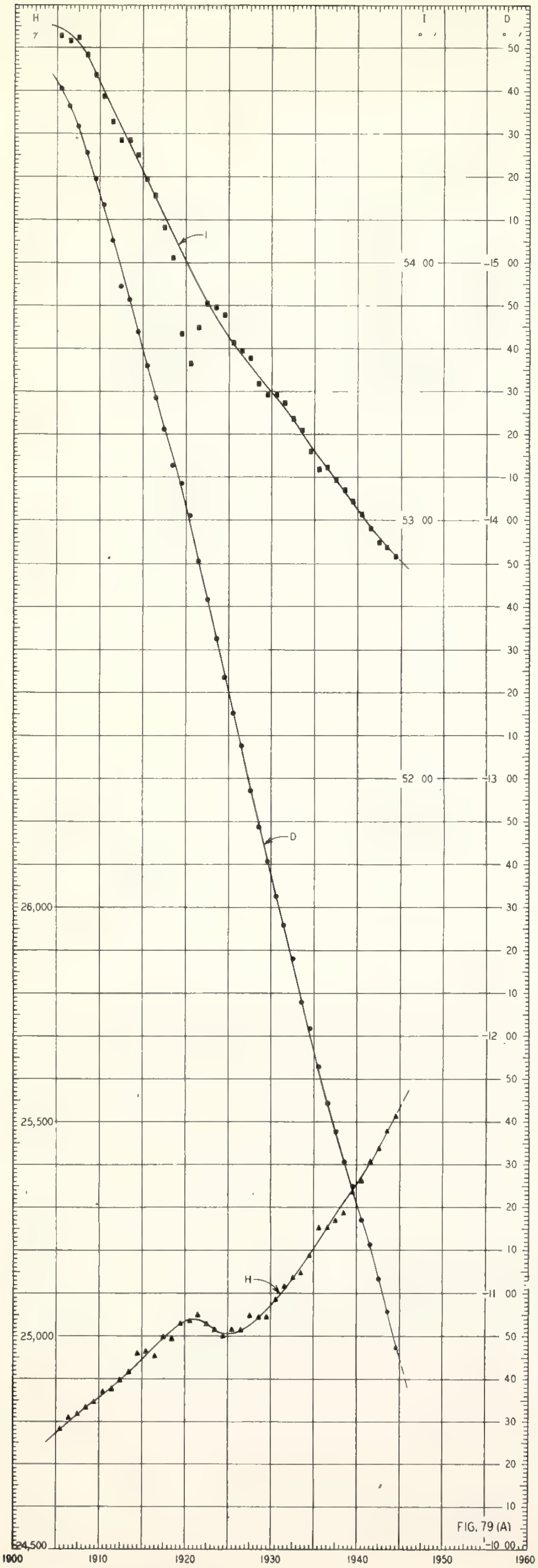


FIG. 79 (A)

VALUES OF X, Y, Z, AND F

Station SAN FERNANDO Latitude 36° 28'

Country SPAIN, EUROPE Longitude 353° 48' E

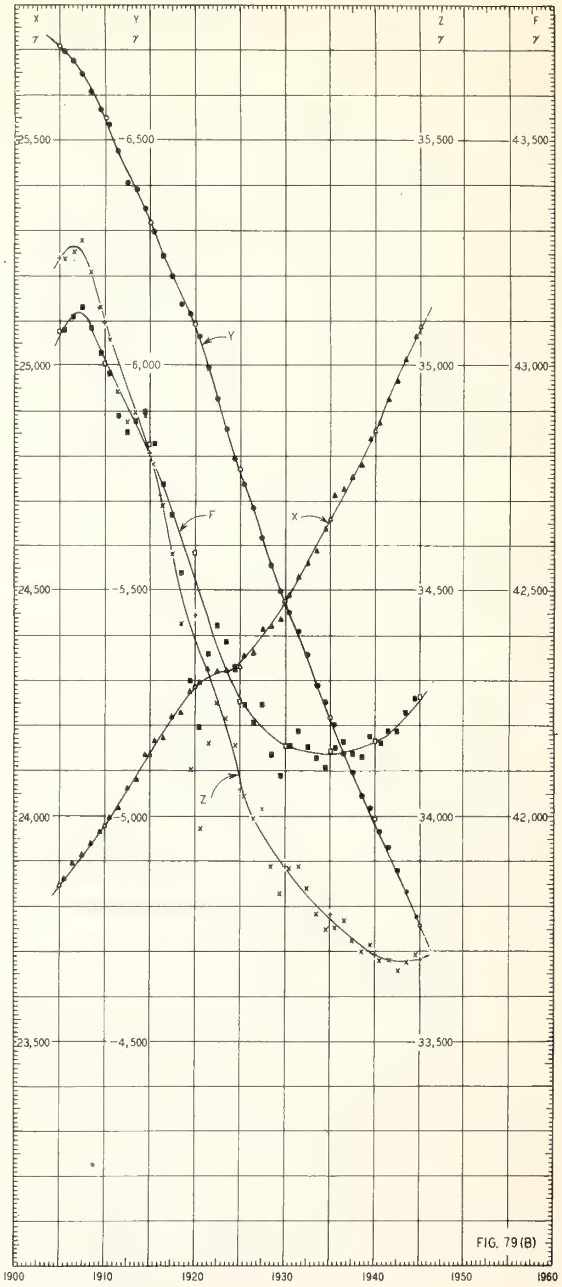


FIG. 79 (B)

VALUES OF D, H, AND I

Station GODHAVN Latitude 69° 14′
Country GREENLAND, NORTH AMERICA Longitude 306° 29′ E

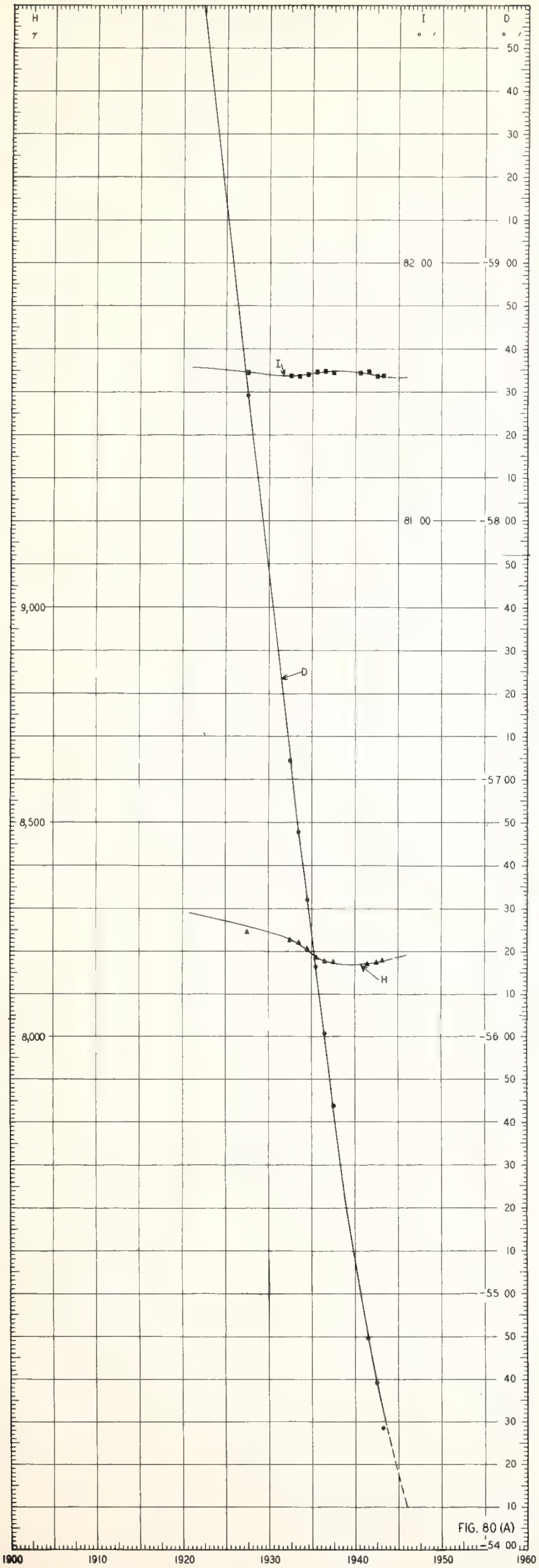


FIG. 80 (A)

VALUES OF X, Y, Z, AND F

Station GODHAVN Latitude 69° 14′
Country GREENLAND, NORTH AMERICA Longitude 306° 29′ E

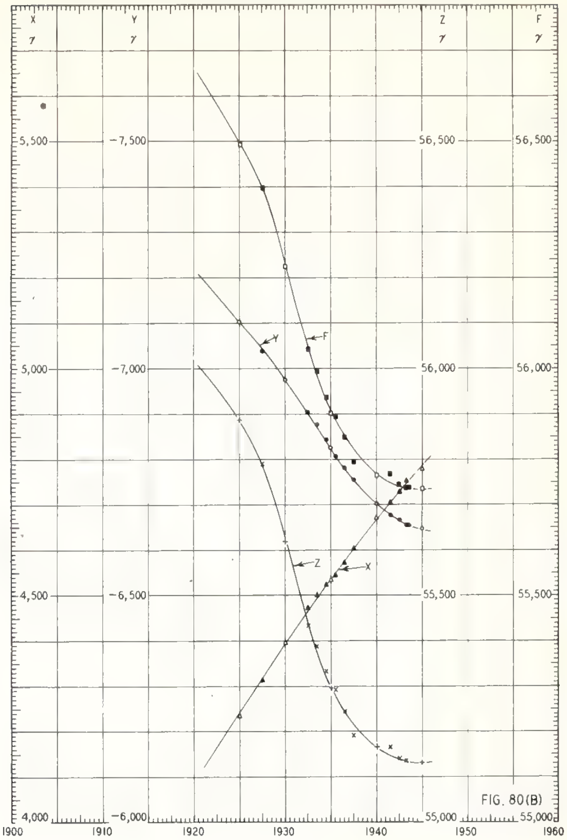


FIG. 80 (B)

VALUES OF D, H, AND I

Station *COLLEGE* Latitude *64° 52′*
Country *ALASKA, NORTH AMERICA* Longitude *212° 11′ E*

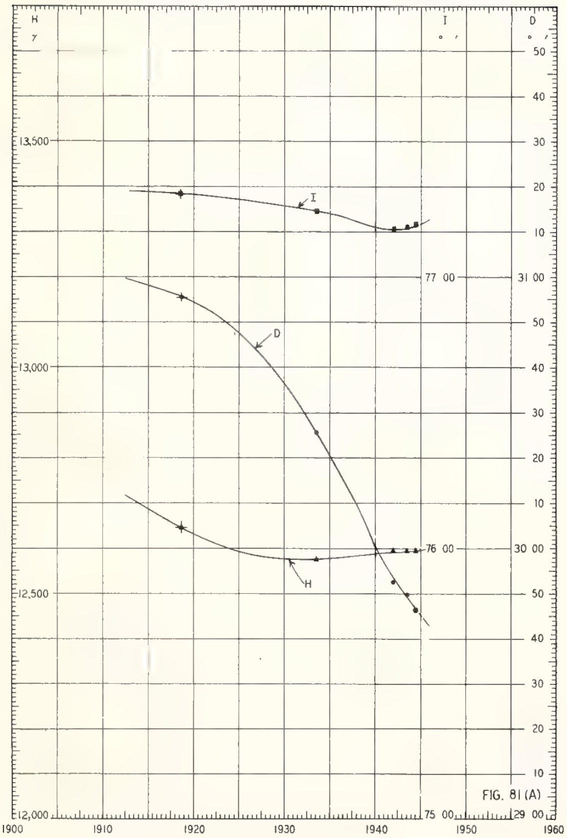


FIG. 81 (A)

VALUES OF X, Y, Z, AND F

Station *COLLEGE* Latitude *64° 52′*
Country *ALASKA, NORTH AMERICA* Longitude *212° 11′ E*

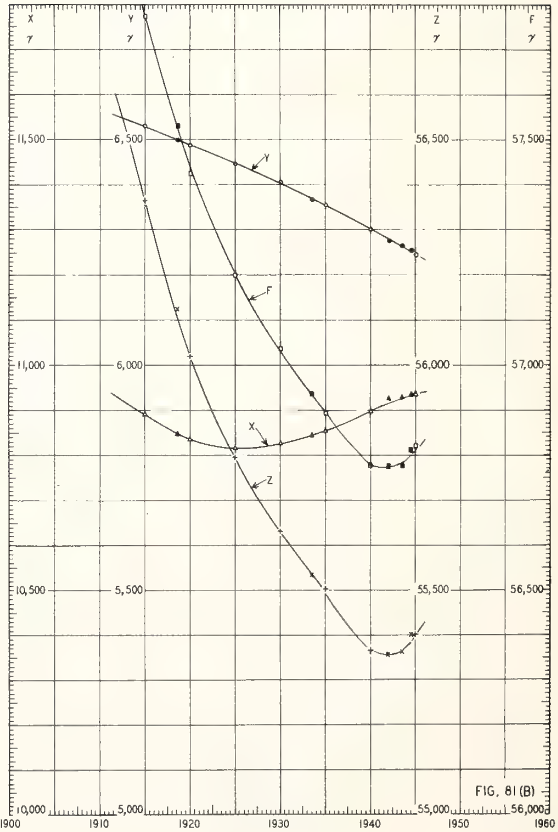


FIG. 81 (B)

VALUES OF D, H, AND I

Station SITKA Latitude 57° 03'

Country ALASKA, NORTH AMERICA Longitude 224° 40' E

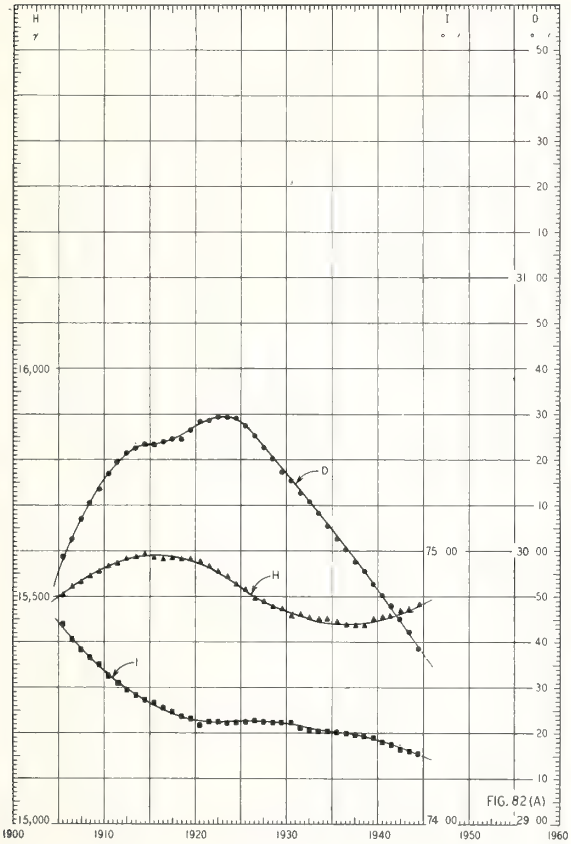


FIG. 82 (A)

VALUES OF X, Y, Z, AND F

Station SITKA Latitude 57° 03'

Country ALASKA, NORTH AMERICA Longitude 224° 40' E

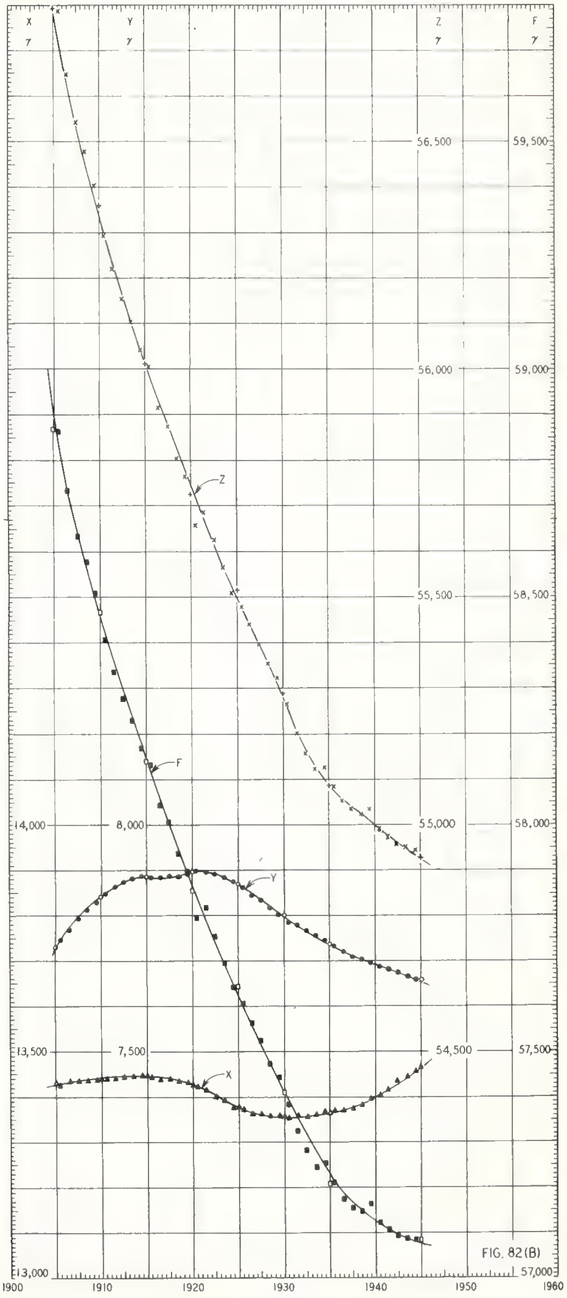


FIG. 82 (B)

VALUES OF D, H, AND I

Station MEANOOK – EDMONTON Latitude 54° 37′

Country CANADA, NORTH AMERICA Longitude 246° 40′

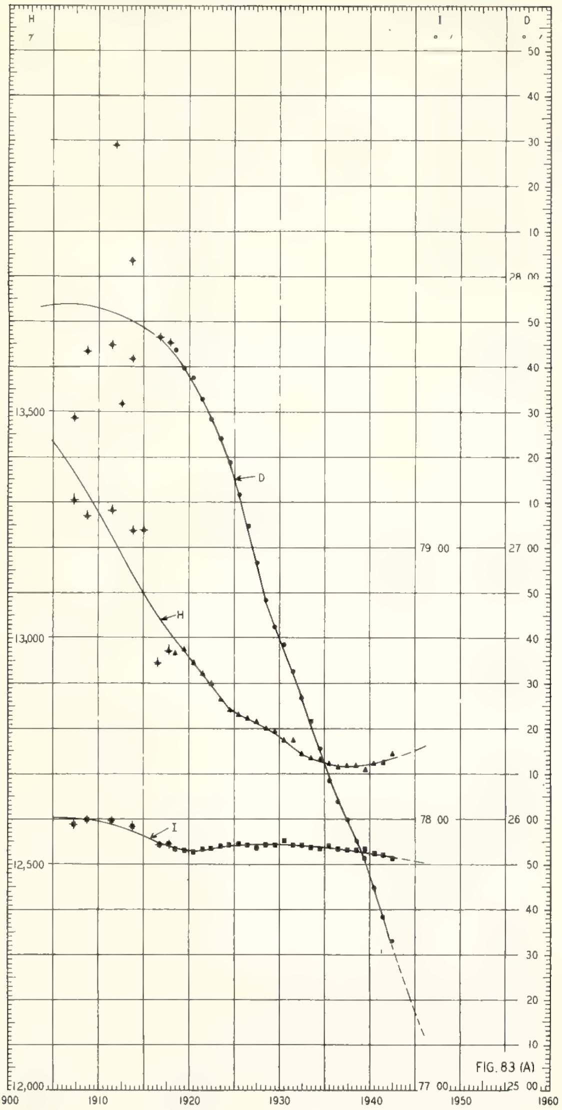


FIG. 83 (A)

VALUES OF X, Y, Z, AND F

Station MEANOOK – EDMONTON Latitude 54° 37′

Country CANADA, NORTH AMERICA Longitude 246° 40′

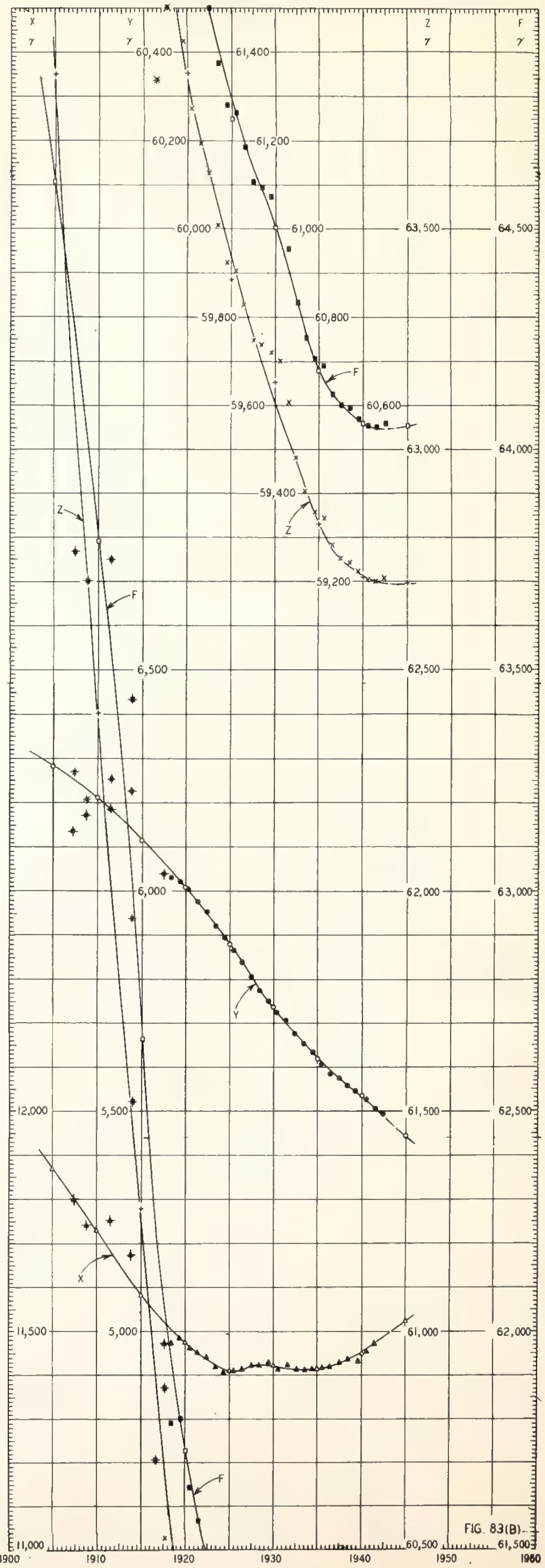


FIG. 83(B)

VALUES OF D, H, AND I

Station AGINCOURT Latitude 43° 47′
Country CANADA, NORTH AMERICA Longitude 280° 44′ E

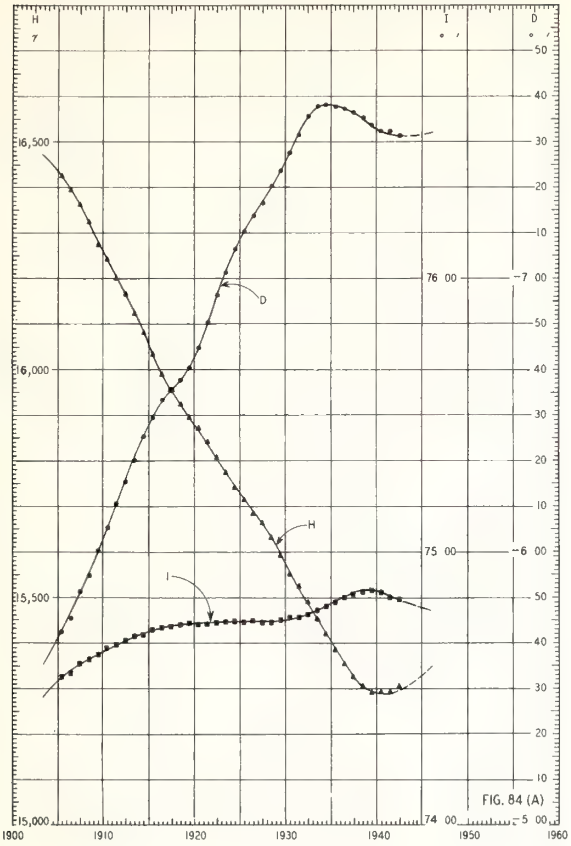


FIG. 84 (A)

VALUES OF X, Y, Z, AND F

Station AGINCOURT Latitude 43° 47′
Country CANADA, NORTH AMERICA Longitude 280° 44′ E

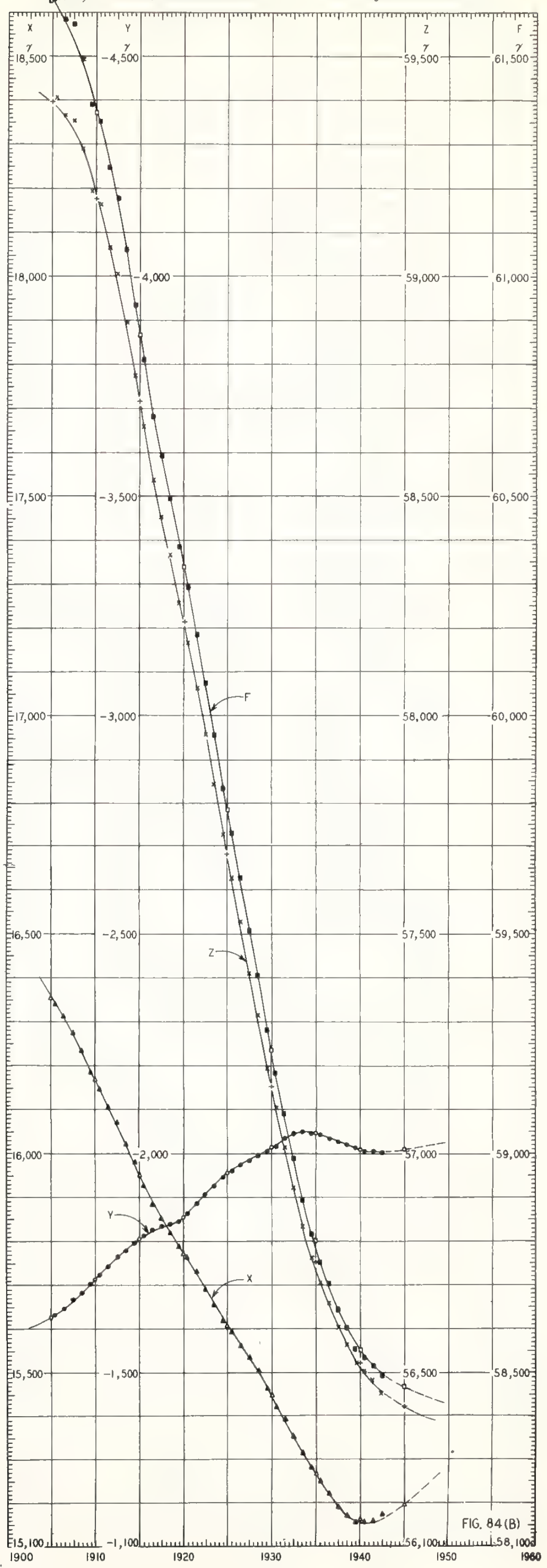


FIG. 84 (B)

VALUES OF D, H, AND I

Station *BALDWIN, KANSAS* Latitude *38° 47′*

Country *UNITED STATES* Longitude *264° 50′ E*

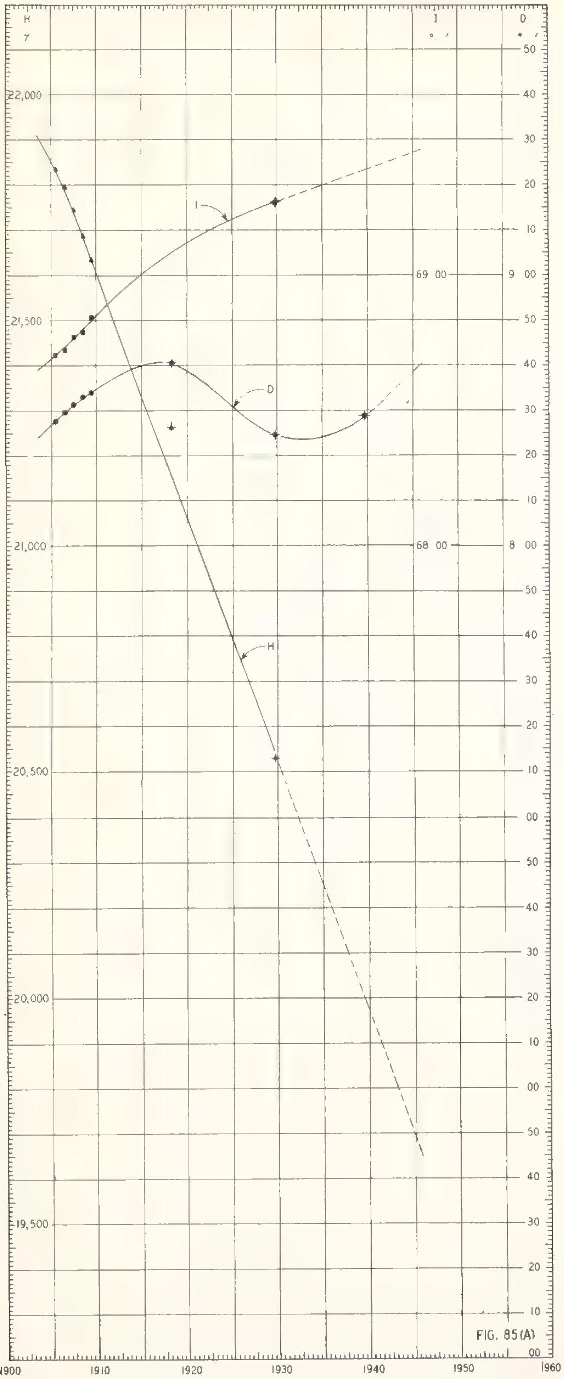


FIG. 85(A)

VALUES OF X, Y, Z, AND F

Station *BALDWIN, KANSAS* Latitude *38° 47′*

Country *UNITED STATES* Longitude *264° 50′ E*

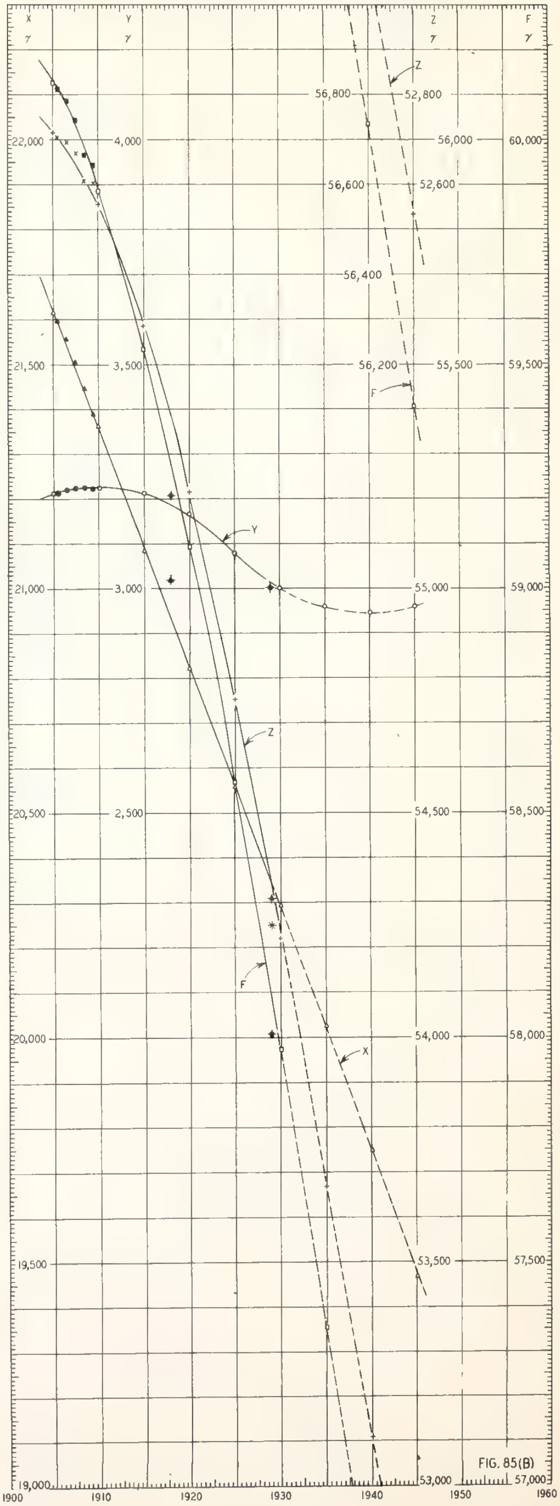


FIG. 85(B)

VALUES OF D, H, AND I

Station CHELTENHAM, MARYLAND Latitude 38° 44′
Country UNITED STATES Longitude 283° 10′ E

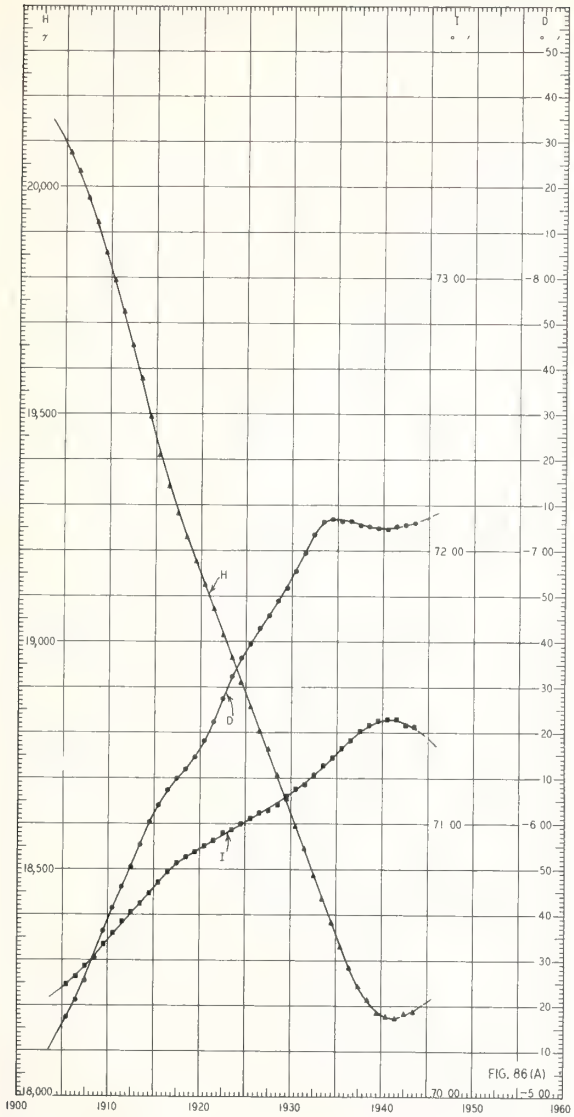


FIG. 86 (A)

VALUES OF X, Y, Z, AND F

Station CHELTENHAM, MARYLAND Latitude 38° 44′
Country UNITED STATES Longitude 283° 10′ E

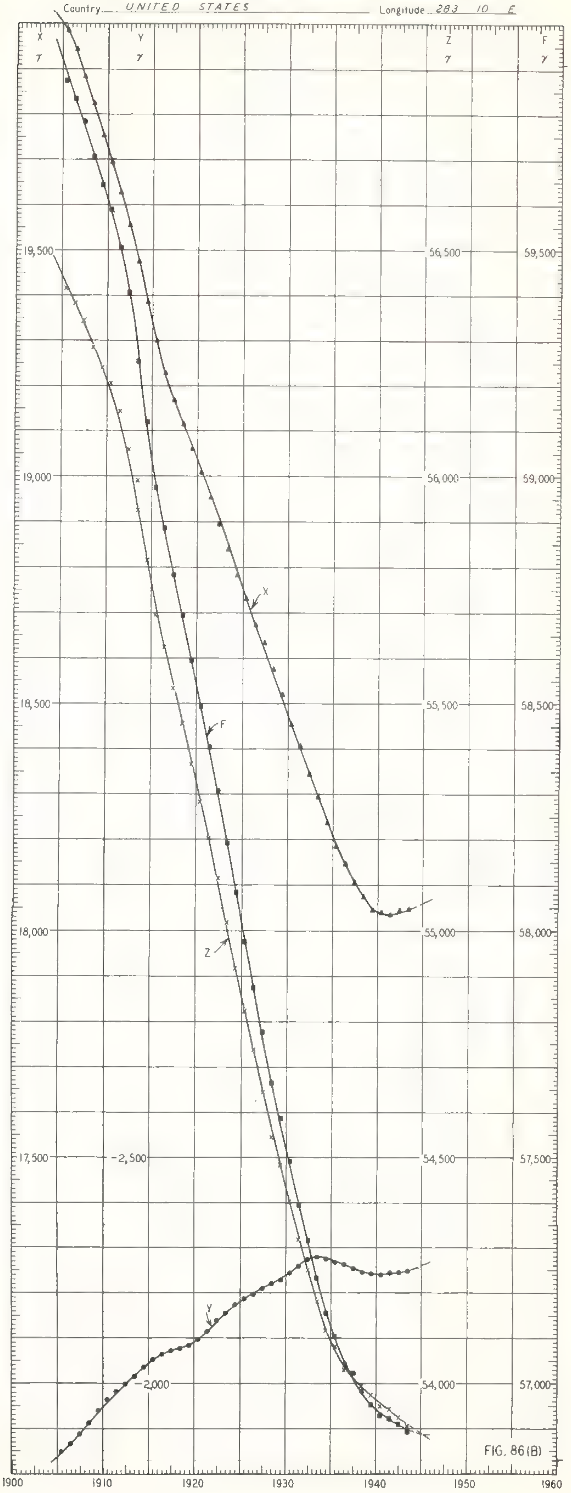


FIG. 86 (B)

VALUES OF D, H, AND I

Station *TUCSON, ARIZONA* Latitude *32° 15′*
Country *UNITED STATES* Longitude *249° 10′ E*

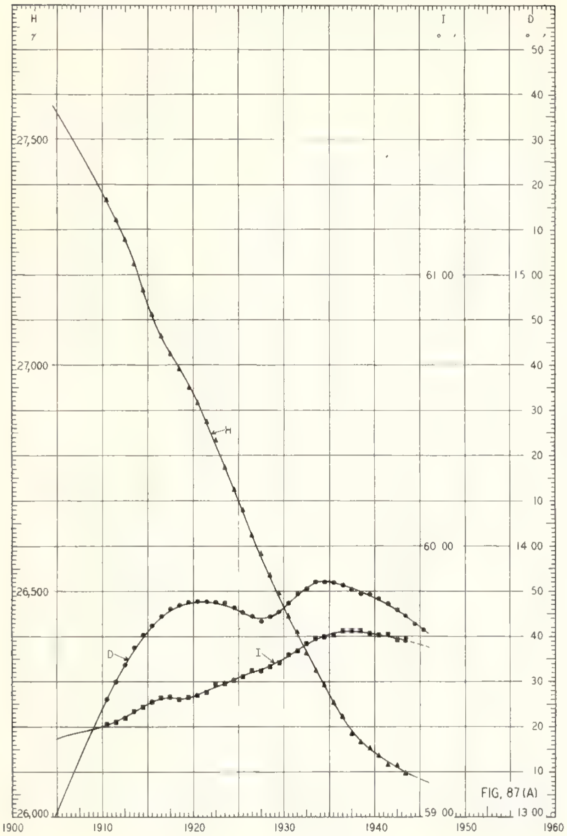


FIG. 87 (A)

VALUES OF X, Y, Z, AND F

Station *TUCSON, ARIZONA* Latitude *32° 15′*
Country *UNITED STATES* Longitude *249° 10′ E*

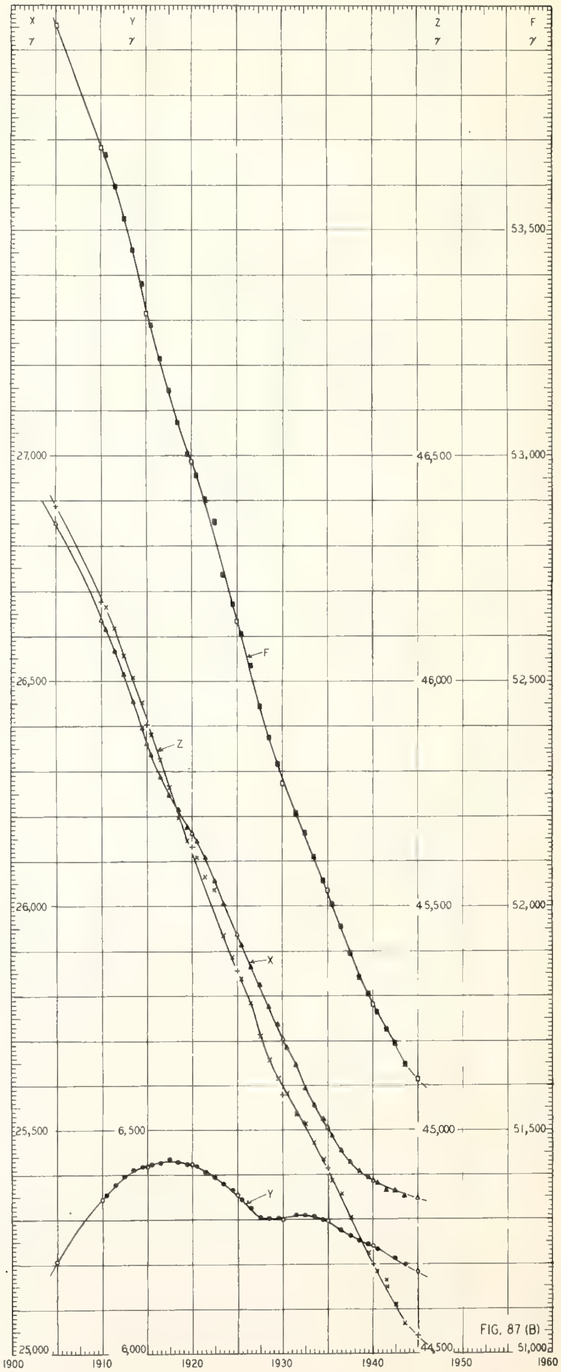


FIG. 87 (B)

VALUES OF D, H, AND I

Station *TEOLOYUCAN - CUAJIMALPA* Latitude *19° 45'*
Country *MEXICO, CENTRAL AMERICA* Longitude *260° 49' E*

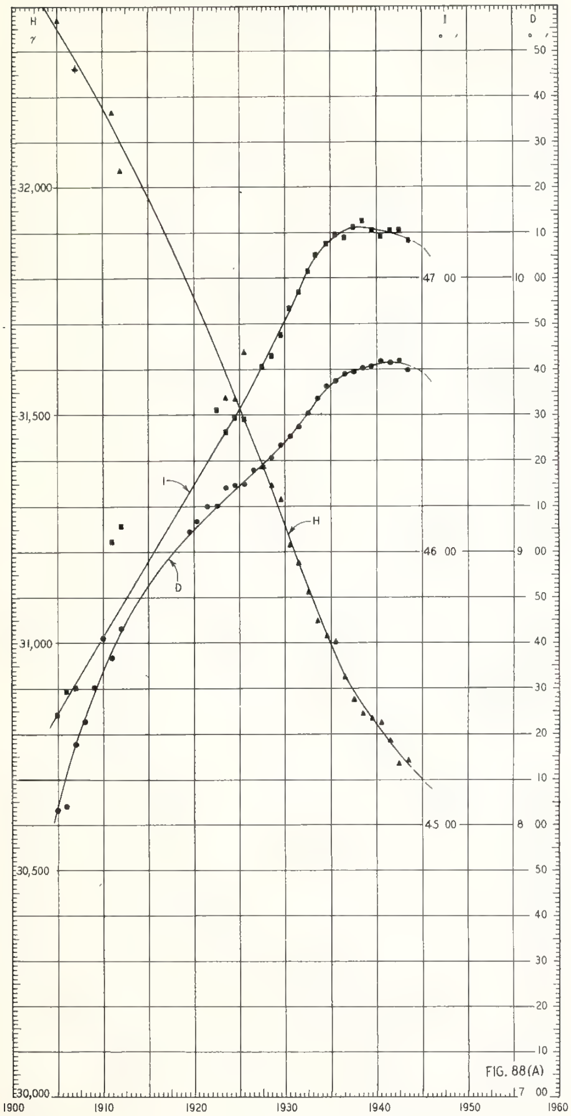


FIG. 88(A)

VALUES OF X, Y, Z, AND F

Station *TEOLOYUCAN - CUAJIMALPA* Latitude *19° 45'*
Country *MEXICO, CENTRAL AMERICA* Longitude *260° 49' E*

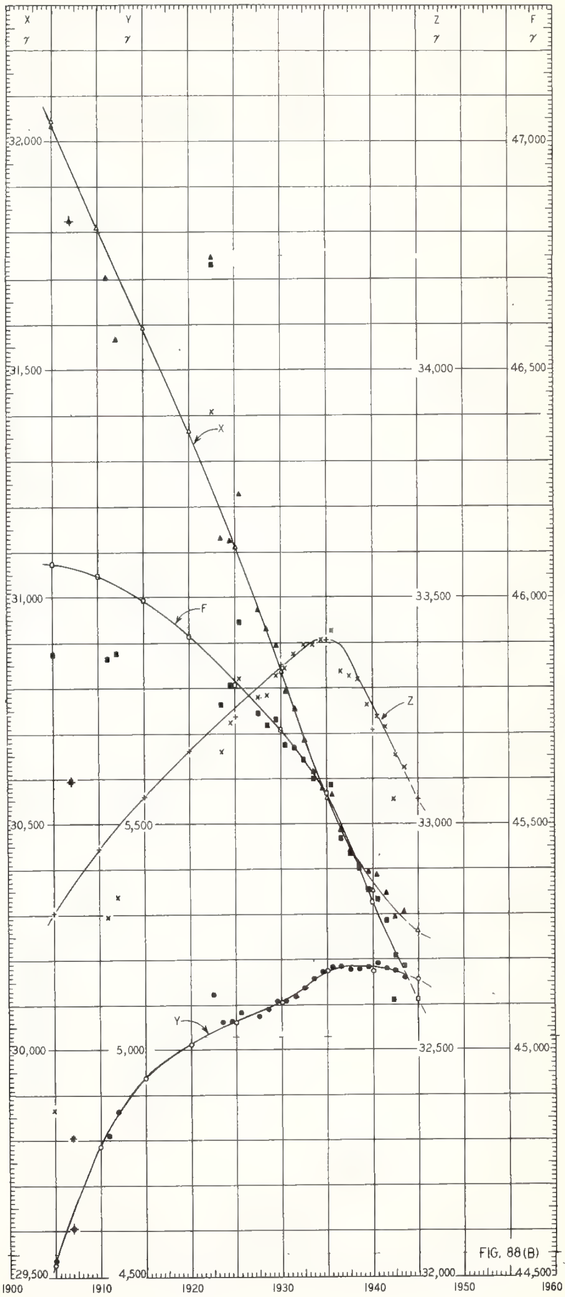


FIG. 88(B)

VALUES OF D, H, AND I

Station *HUANCAYO – SAN LORENZO – LIMA* Latitude *– 12° 03′*
Country *PERU, SOUTH AMERICA* Longitude *284° 40′ E*

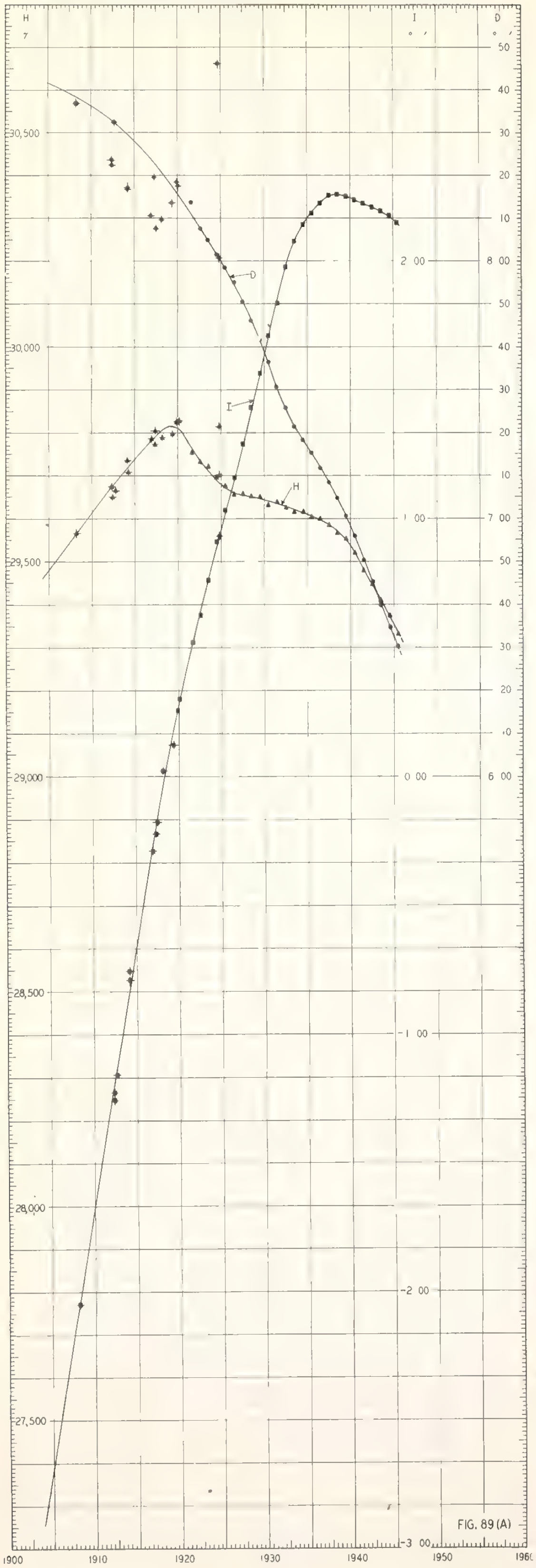


FIG. 89 (A)

VALUES OF X, Y, Z, AND F

Station *HUANCAYO – SAN LORENZO – LIMA* Latitude *– 12° 03′*
Country *PERU, SOUTH AMERICA* Longitude *284° 40′ E*

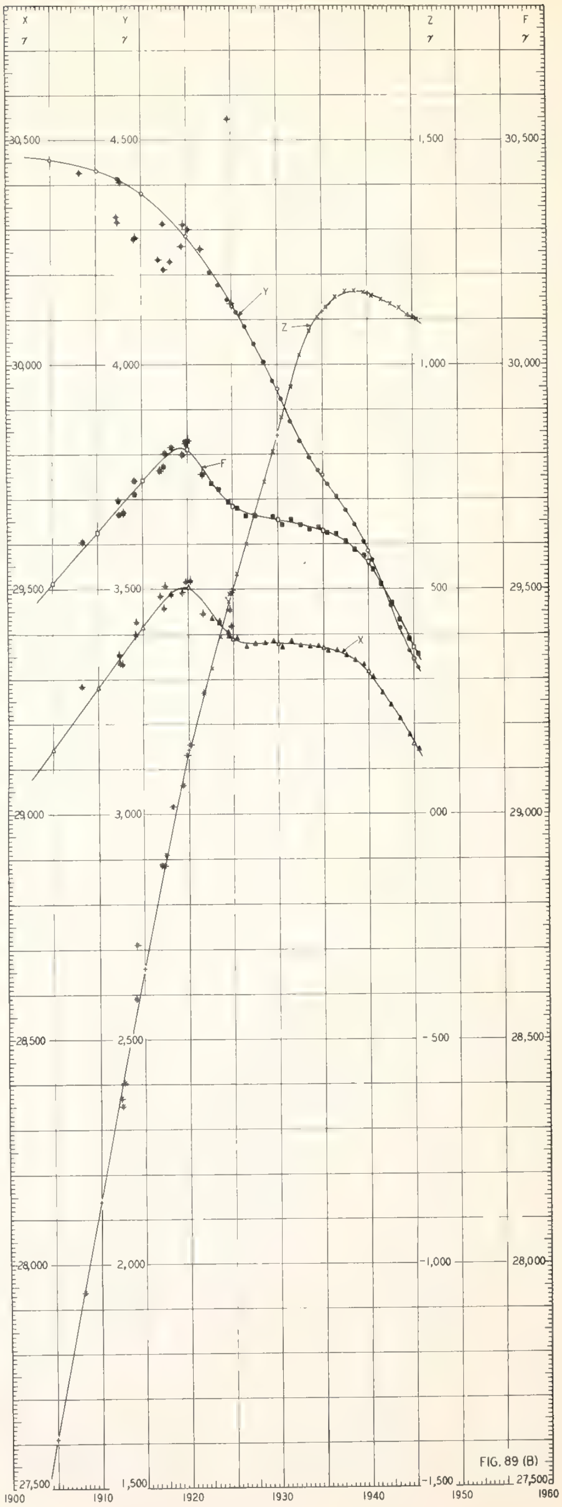


FIG. 89 (B)

VALUES OF D, H, AND I

Station *LA QUIACA* Latitude *-22° 07′*

Country *ARGENTINA, SOUTH AMERICA* Longitude *294° 25′ E*

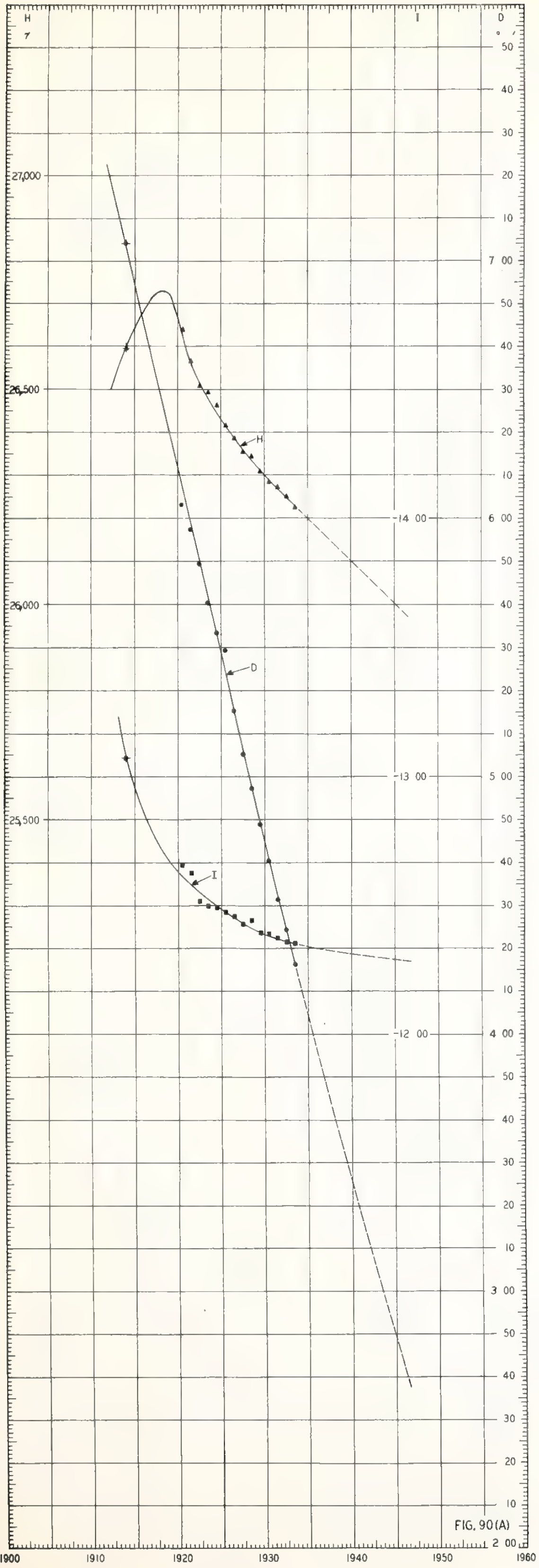


FIG. 90(A)

VALUES OF X, Y, Z, AND F

Station *LA QUIACA* Latitude *-22° 07′*

Country *ARGENTINA, SOUTH AMERICA* Longitude *294° 25′ E*

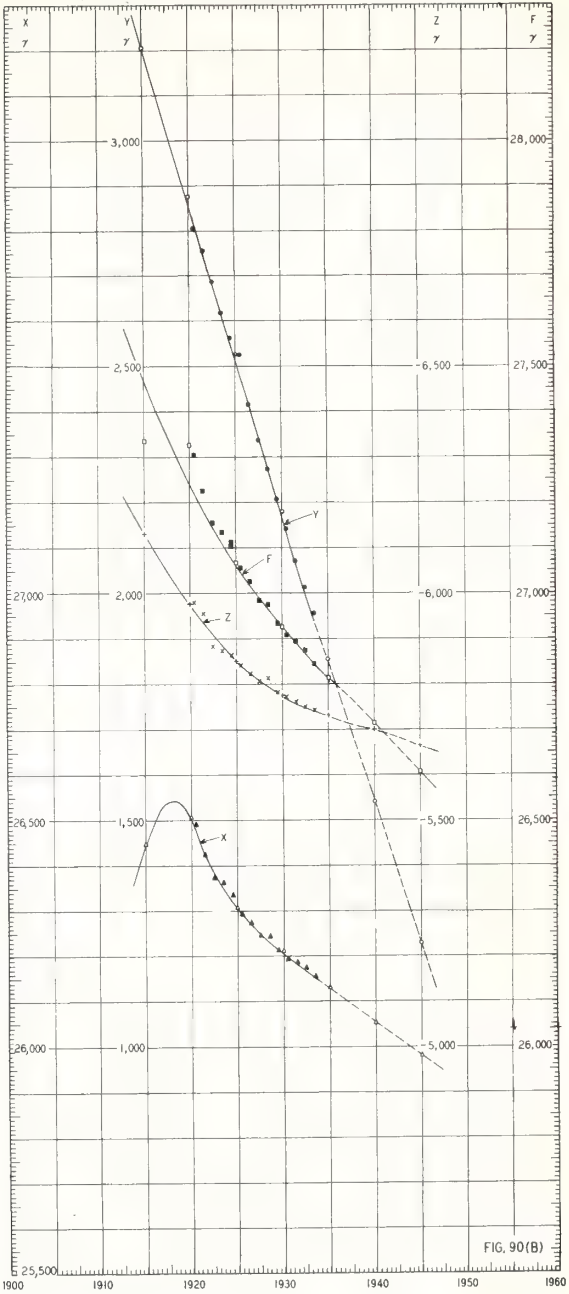


FIG. 90(B)

VALUES OF D, H, AND I

Station VASSOURAS — RIO DE JANEIRO Latitude — 22° 24′

Country BRAZIL, SOUTH AMERICA Longitude 316° 21′ E

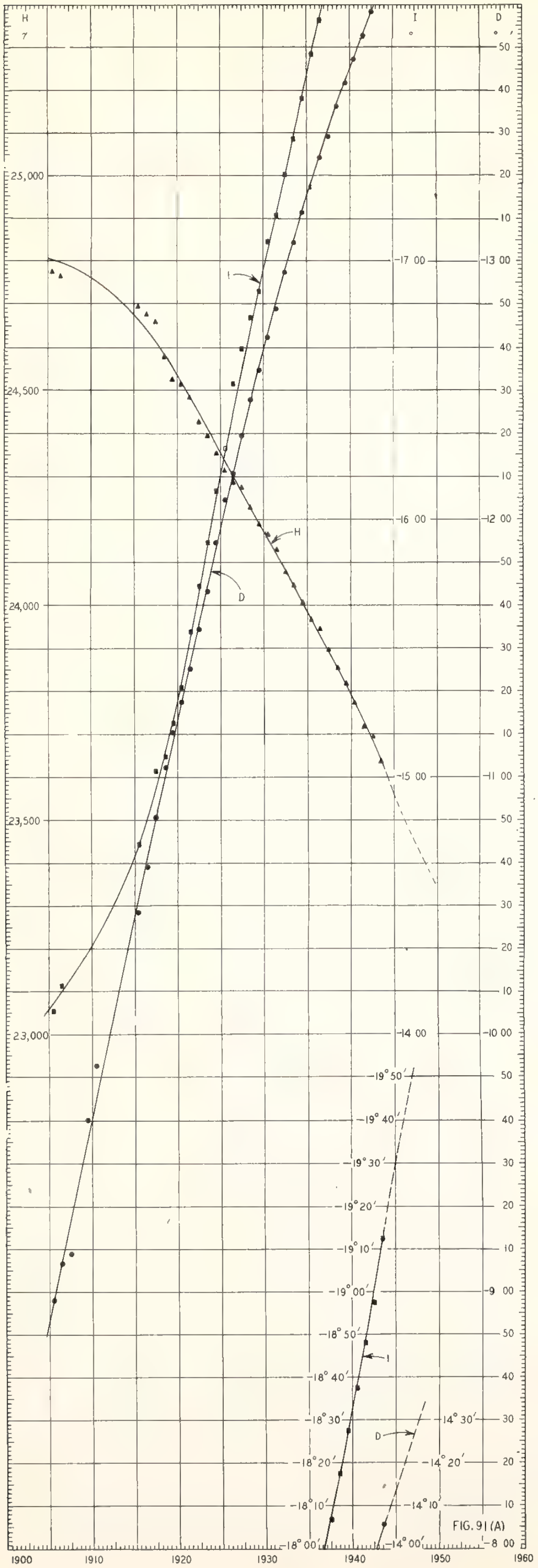


FIG. 91 (A)

VALUES OF X, Y, Z, AND F

Station VASSOURAS — RIO DE JANEIRO Latitude — 22° 24′

Country BRAZIL, SOUTH AMERICA Longitude 316° 21′ E

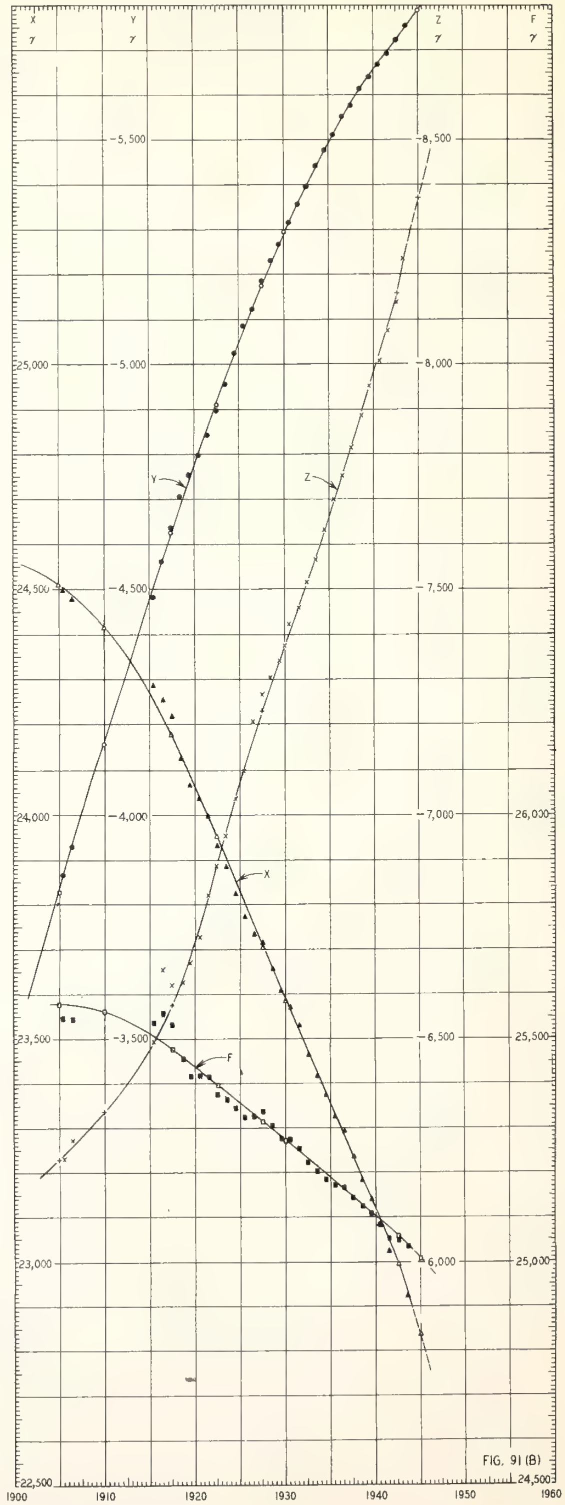


FIG. 91 (B)

VALUES OF D, H, AND I

Station *PILAR* Latitude *-31° 40′*
Country *ARGENTINA, SOUTH AMERICA* Longitude *296° 07′ E*

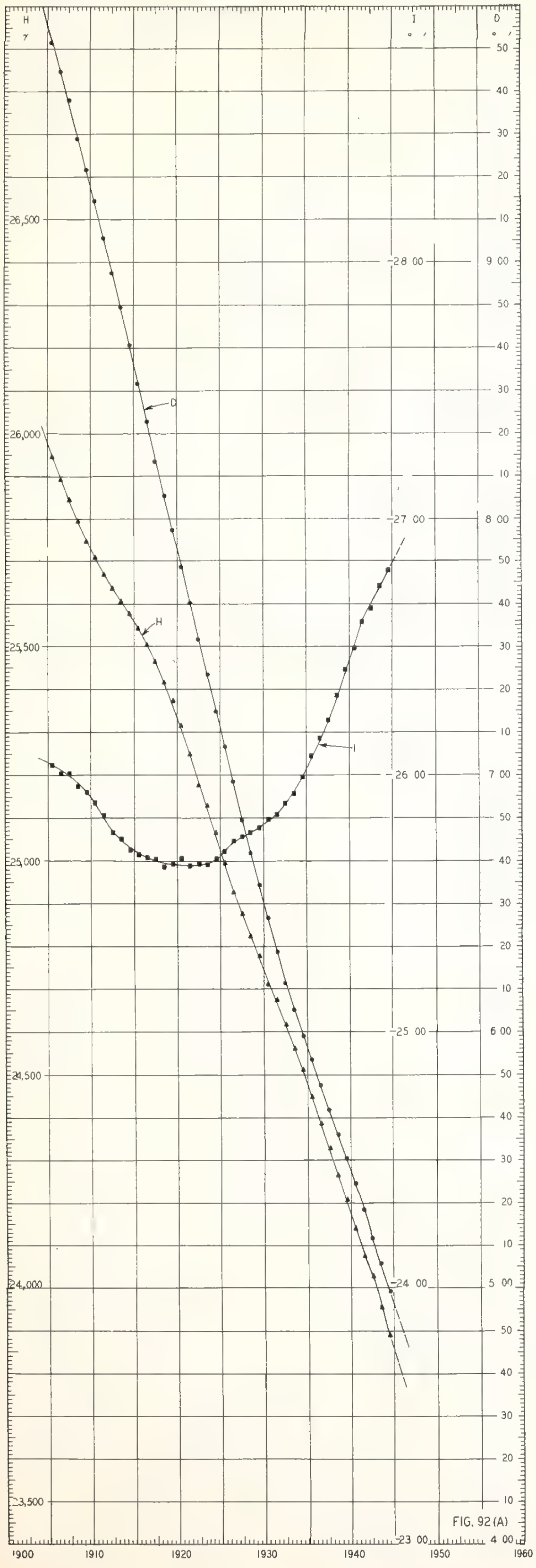


FIG. 92 (A)

VALUES OF X, Y, Z, AND F

Station *PILAR* Latitude *-31° 40′*
Country *ARGENTINA, SOUTH AMERICA* Longitude *296° 07′ E*

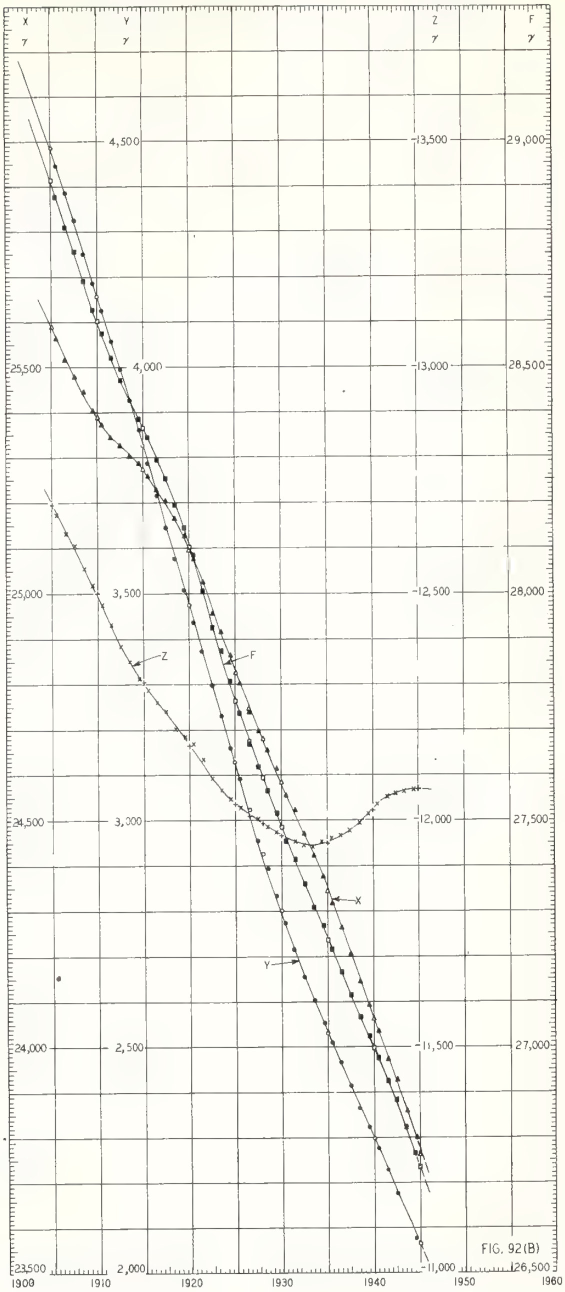


FIG. 92 (B)

VALUES OF D, H, AND I

Station NEW YEAR'S ISLAND (STATEN IS.) Latitude − 54° 39′
Country ARGENTINA, SOUTH AMERICA Longitude 295° 51′ E

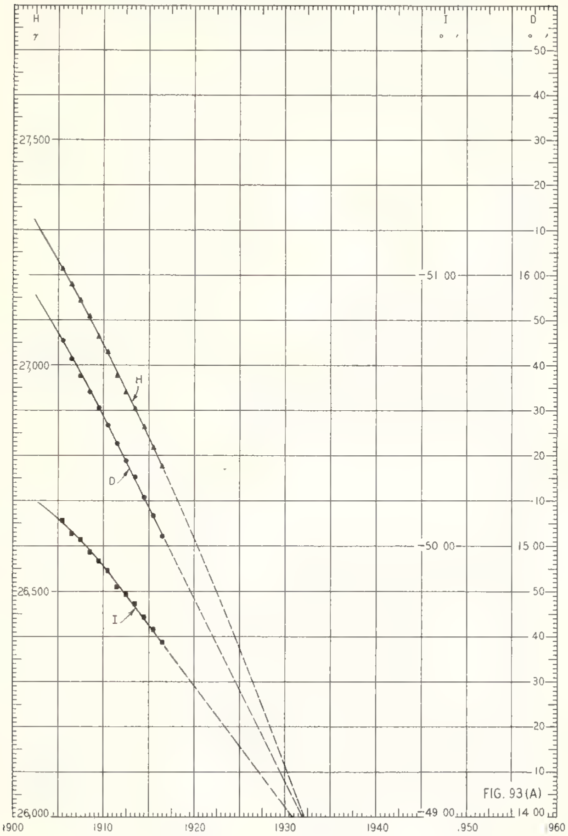


FIG. 93 (A)

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Carnegie Institution of Washington
Form [illegible]

VALUES OF X, Y, Z, AND F

Station NEW YEAR'S ISLAND (STATEN IS.) Latitude − 54° 39′
Country ARGENTINA, SOUTH AMERICA Longitude 295° 51′ E

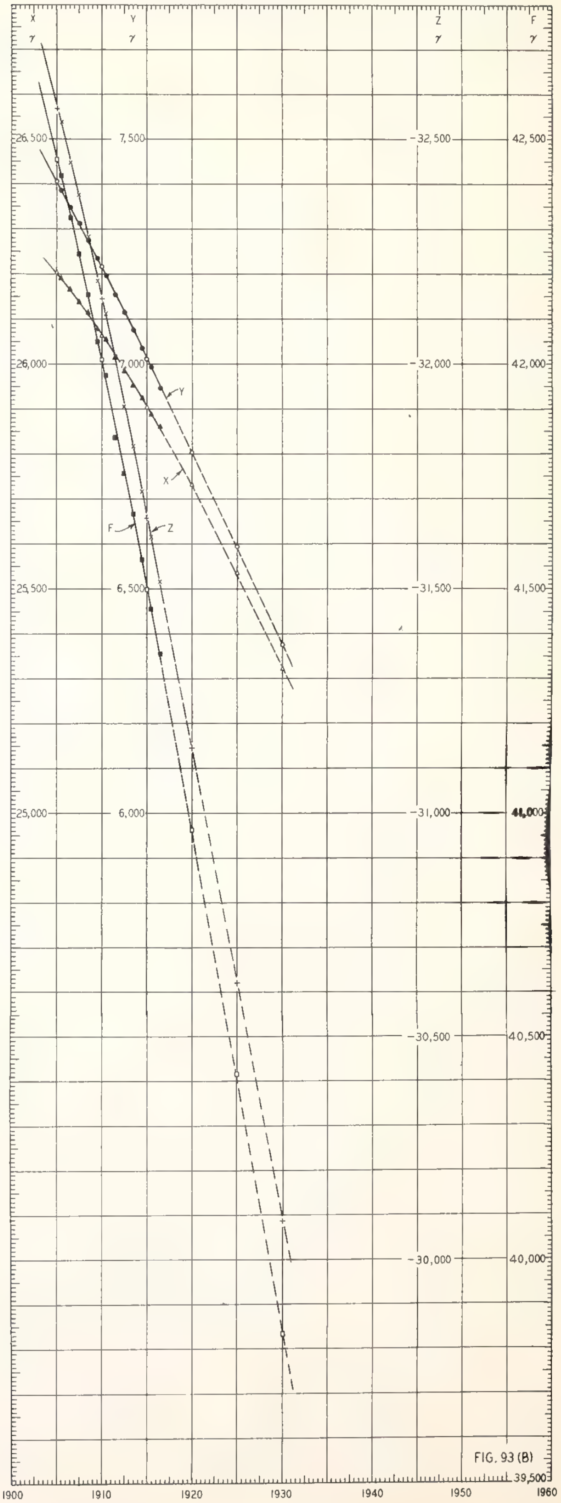

FIG. 93 (B)

VALUES OF D, H, AND I

Station SAN MIGUEL (PONTA DELGADA) Latitude 37° 46'

Country AZORES, ATLANTIC OCEAN Longitude 334° 21' E

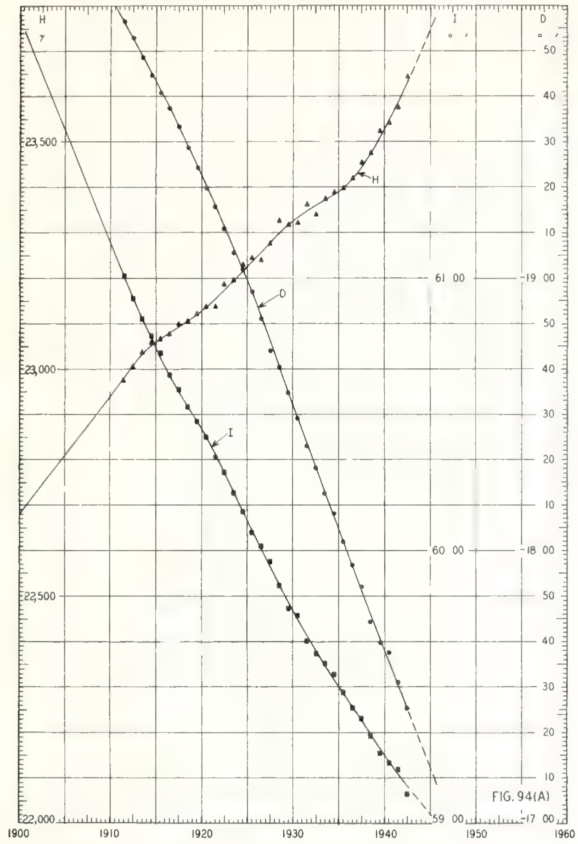

FIG. 94(A)

VALUES OF X, Y, Z, AND F

Station SAN MIGUEL (PONTA DELGADA) Latitude 37° 46'

Country AZORES, ATLANTIC OCEAN Longitude 334° 21' E

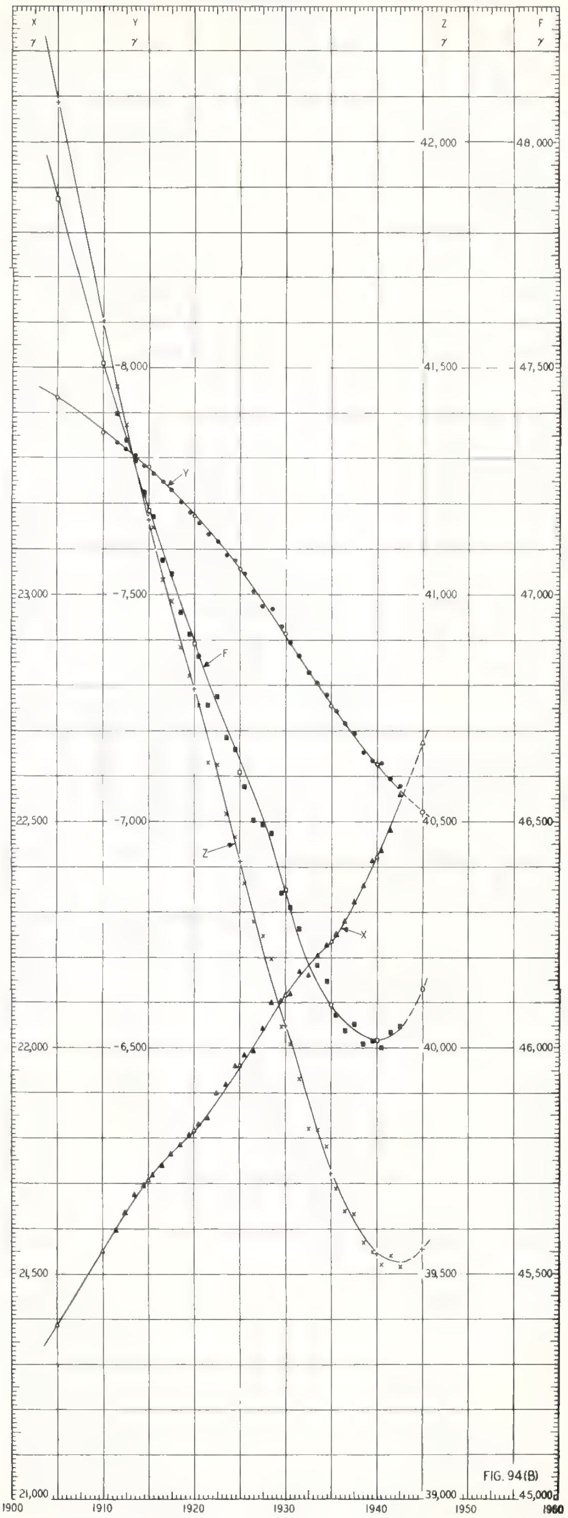

FIG. 94(B)

VALUES OF D, H, AND I

Station *SAN JUAN (VIEQUES)* Latitude *18° 22.9'*
Country *PUERTO RICO, WEST INDIES* Longitude *293° 52.9' E*

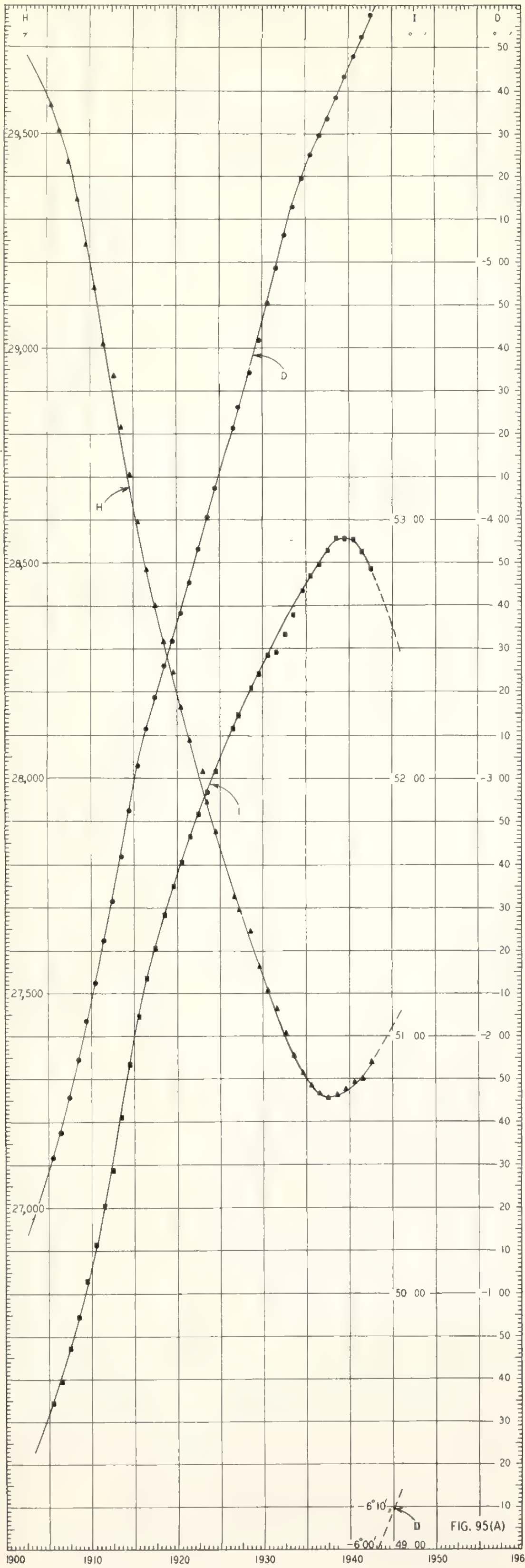

FIG. 95(A)

VALUES OF X, Y, Z, AND F

Station *SAN JUAN (VIEQUES)* Latitude *18° 22.9'*
Country *PUERTO RICO, WEST INDIES* Longitude *293° 52.9' E*

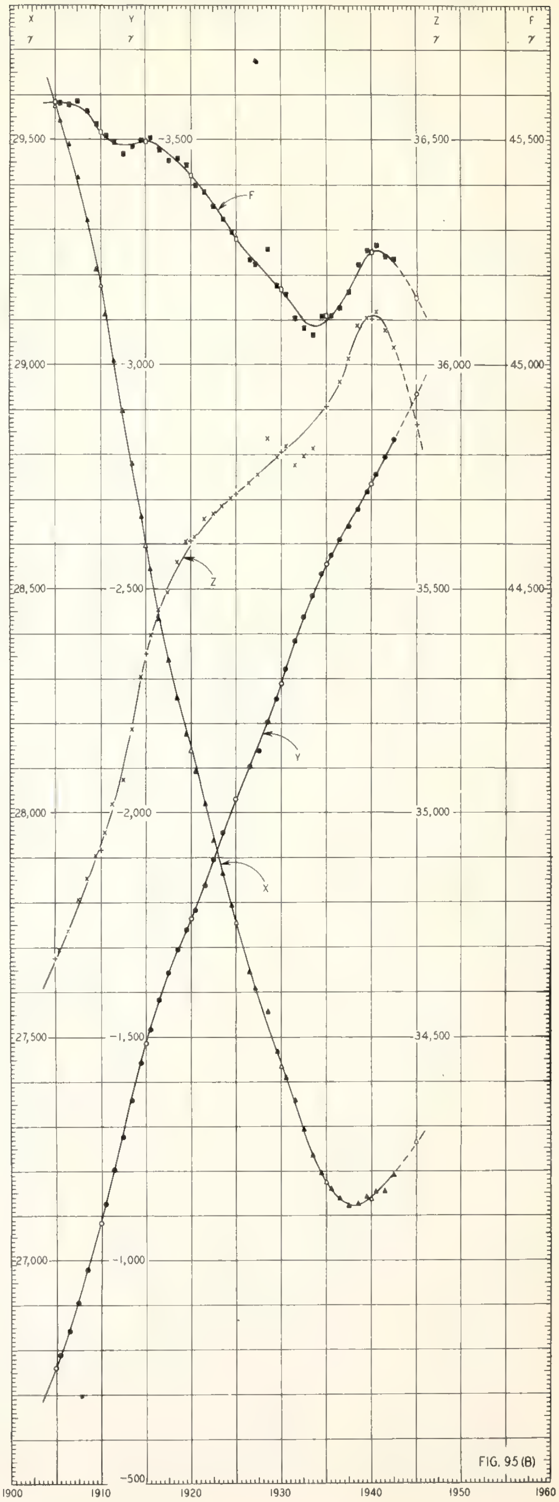

FIG. 95(B)

VALUES OF D, H, AND I

Station BATAVIA - BUITENZORG - KUYPER Latitude -06° 11'
Country JAVA, ISLANDS INDIAN OCEAN Longitude 106° 49' E

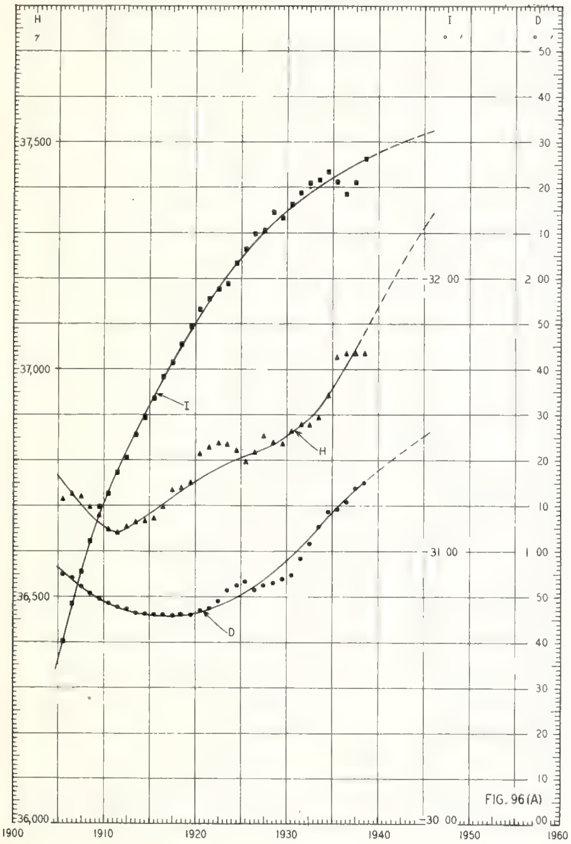

FIG. 96(A)

VALUES OF X, Y, Z, AND F

Station BATAVIA - BUITENZORG - KUYPER Latitude -06° 11'
Country JAVA, ISLANDS INDIAN OCEAN Longitude 106° 49' E

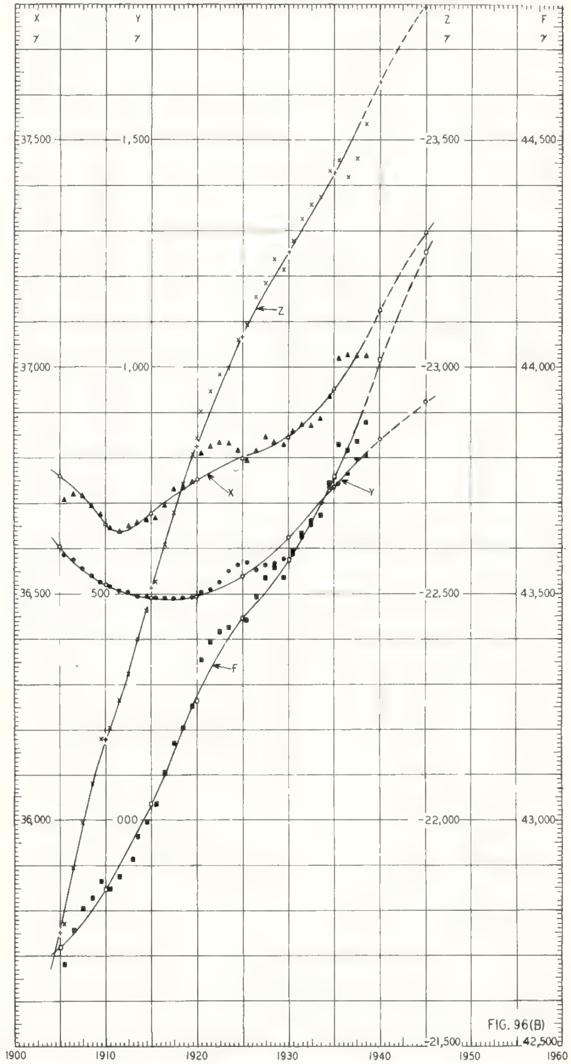

FIG. 96(B)

VALUES OF D, H, AND I

Station TANANARIVE Latitude -18° 55'

Country MADAGASCAR ISLAND, INDIAN OCEAN Longitude 47° 32' E

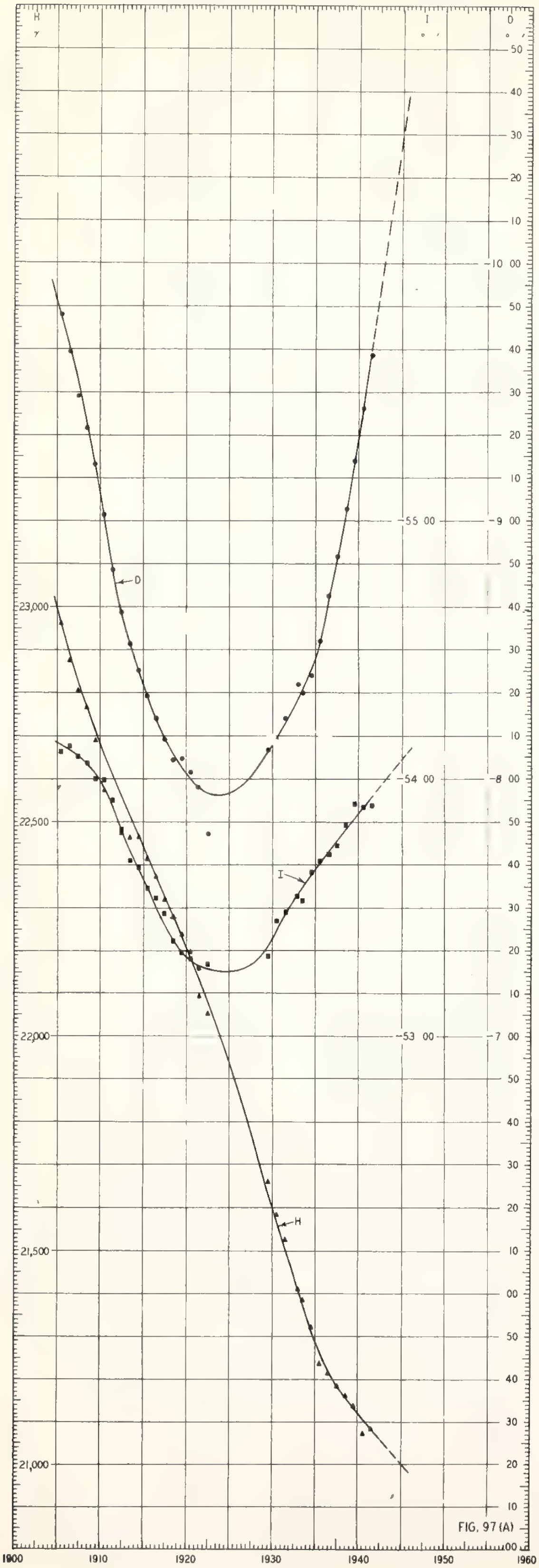

FIG. 97 (A)

VALUES OF X, Y, Z, AND F

Station TANANARIVE Latitude -18° 55'

Country MADAGASCAR ISLAND, INDIAN OCEAN Longitude 47° 32' E

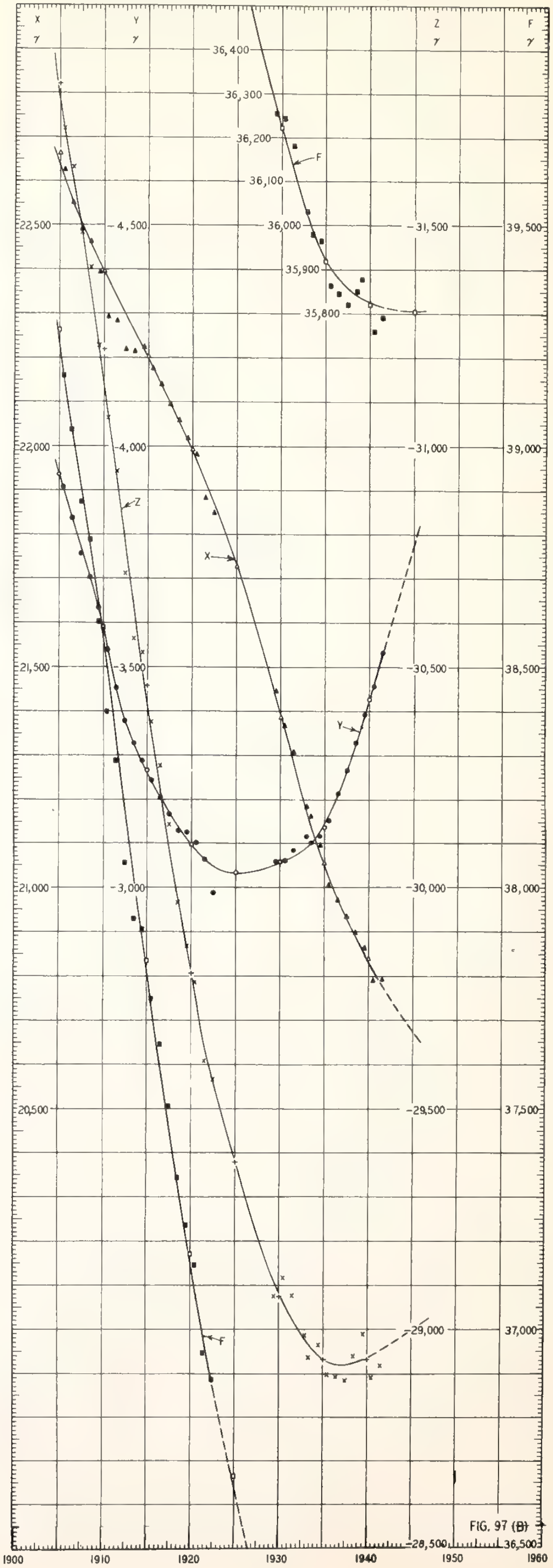

FIG. 97 (B)

VALUES OF D, H, AND I

Station *MAURITIUS* Latitude *−20° 06′*
Country *ISLANDS, INDIAN OCEAN* Longitude *57° 33′ E*

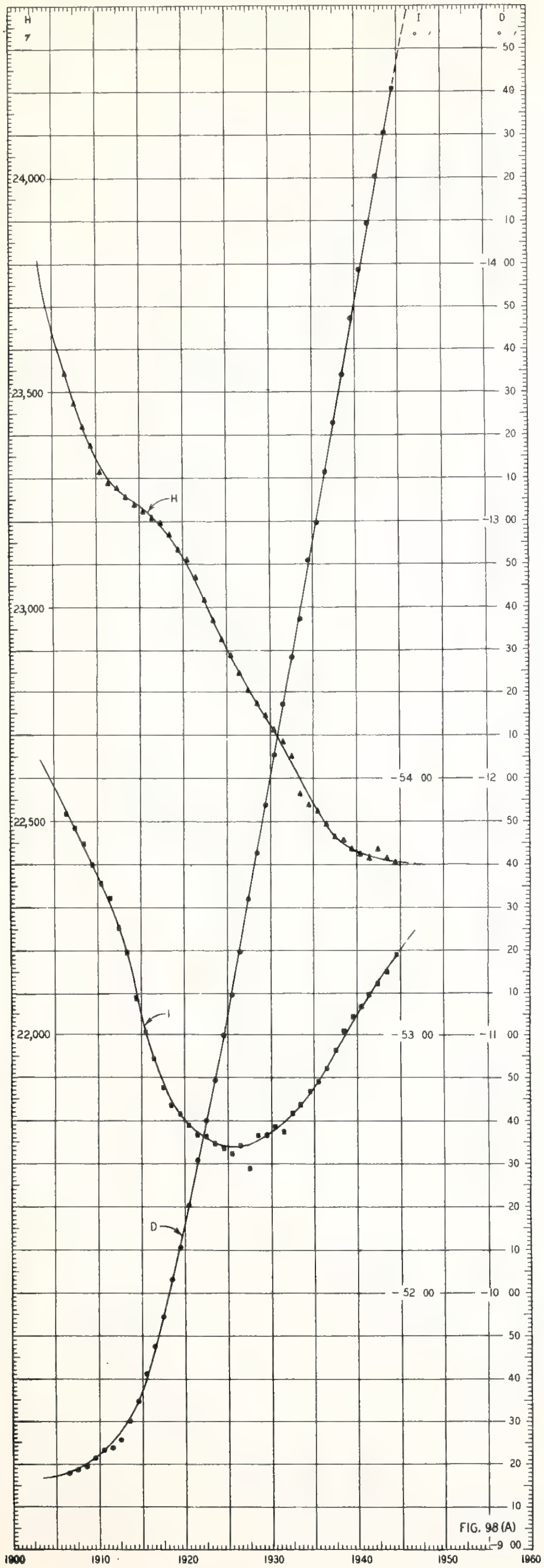

FIG. 98 (A)

VALUES OF X, Y, Z, AND F

Station *MAURITIUS* Latitude *−20° 06′*
Country *ISLANDS, INDIAN OCEAN* Longitude *57° 33′ E*

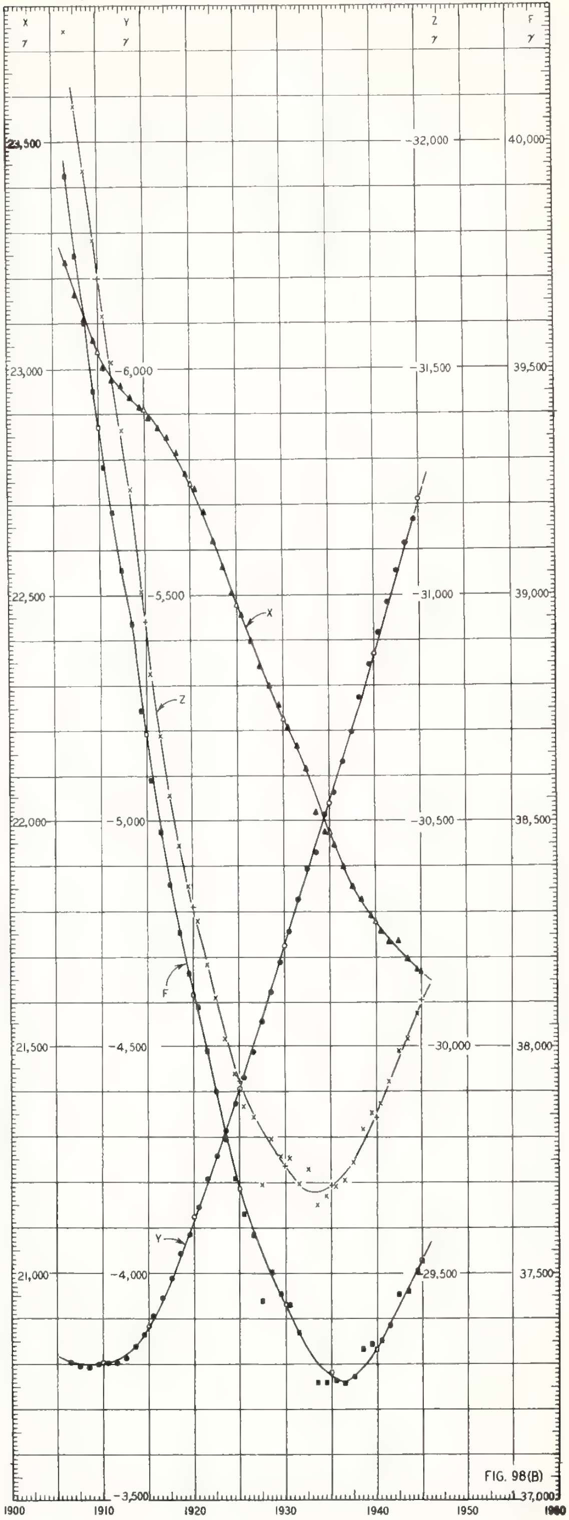

FIG. 98(B)

VALUES OF D, H, AND I

Station TAIHOKU Latitude 25° 02.3′

Country FORMOSA, ISLANDS PACIFIC OCEAN Longitude 121° 30.8′ E

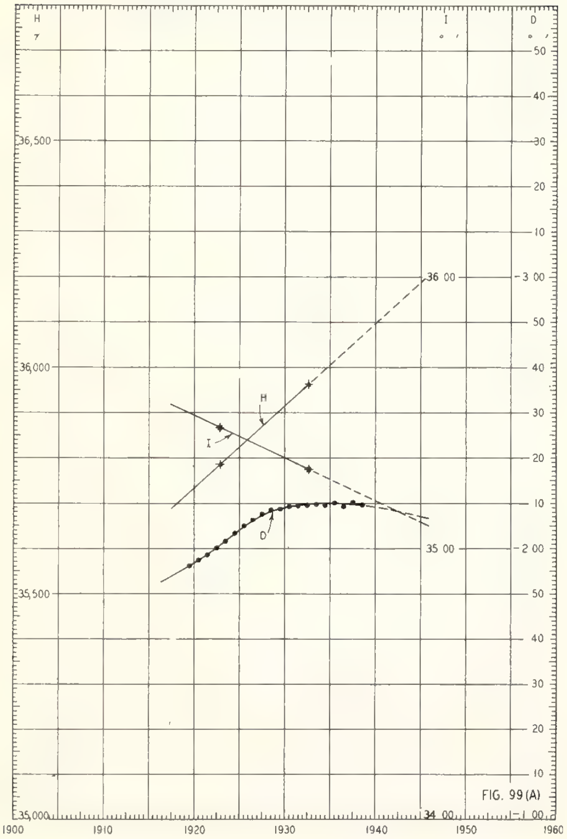

FIG. 99 (A)

VALUES OF X, Y, Z, AND F

Station TAIHOKU Latitude 25° 02.3′

Country FORMOSA, ISLANDS PACIFIC OCEAN Longitude 121° 30.8′ E

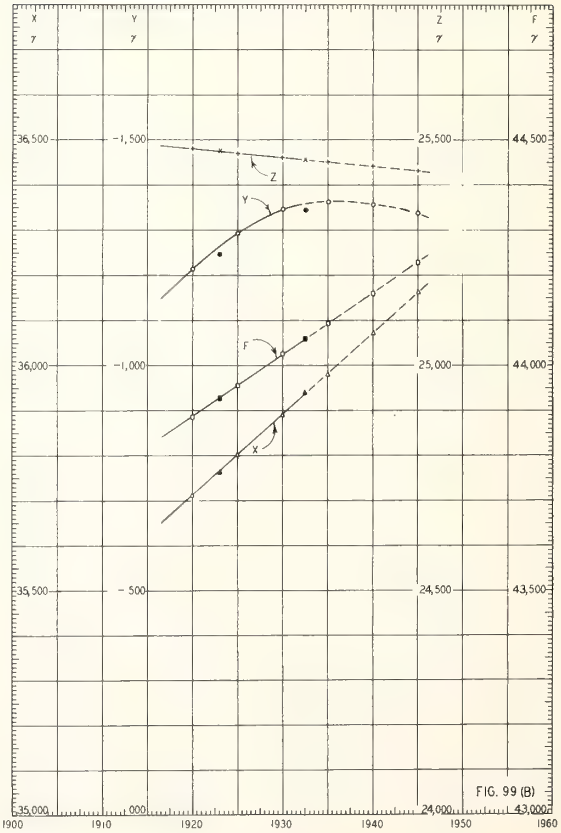

FIG. 99 (B)

VALUES OF D, H, AND I

Station *HONOLULU* Latitude *21° 19.2'*
Country *HAWAII, ISLANDS PACIFIC OCEAN* Longitude *201° 56.2' E*

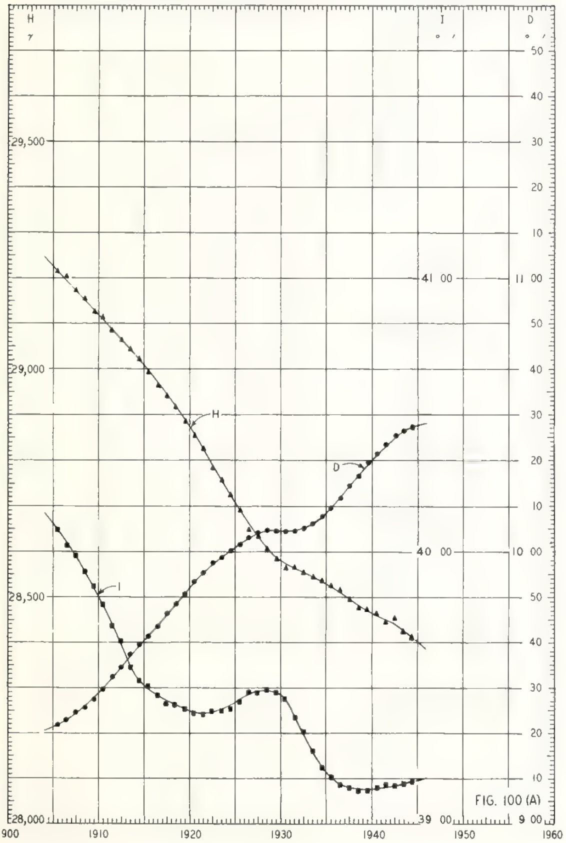

FIG. 100 (A)

VALUES OF X, Y, Z, AND F

Station *HONOLULU* Latitude *21° 19.2'*
Country *HAWAII, ISLANDS PACIFIC OCEAN* Longitude *201° 56.2' E*

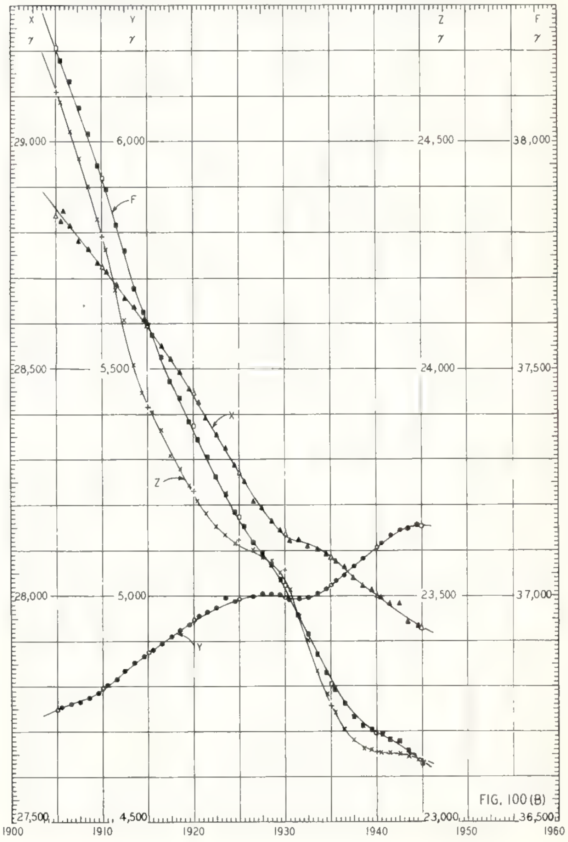

FIG. 100 (B)

VALUES OF D, H, AND I

Station *ANTIPOLO* Latitude *14° 36′*

Country *PHILIPPINES, ISLANDS PACIFIC OCEAN* Longitude *121° 10′ E*

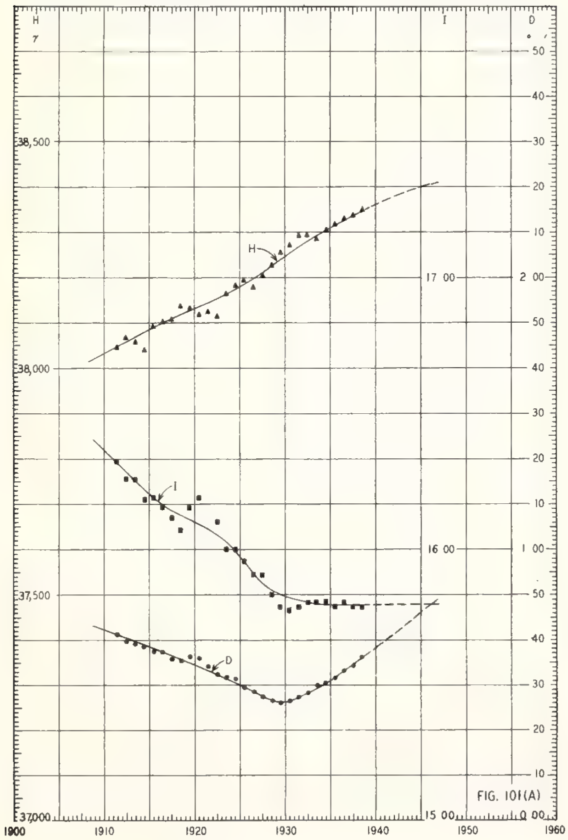

FIG. 101(A)

VALUES OF X, Y, Z, AND F

Station *ANTIPOLO* Latitude *14° 36′*

Country *PHILIPPINES, ISLANDS PACIFIC OCEAN* Longitude *121° 10′ E*

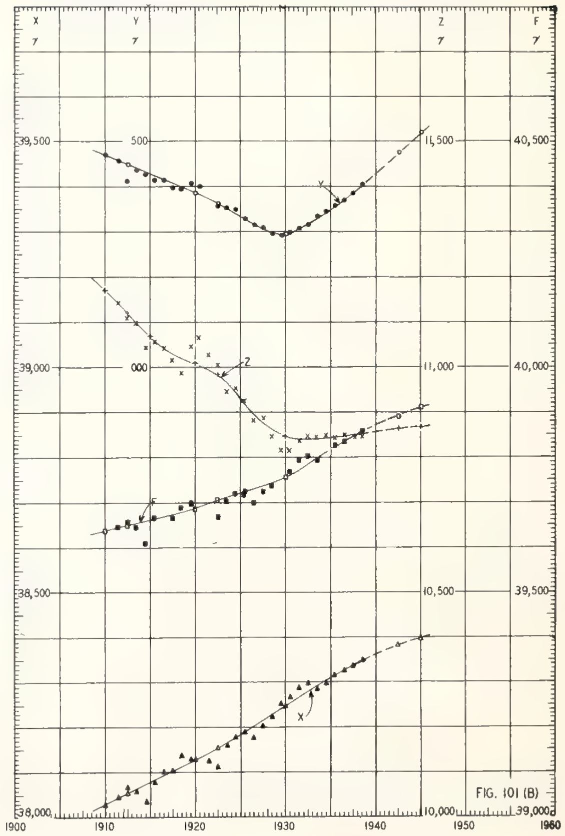

FIG. 101 (B)

VALUES OF D, H, AND I

Station *PALAU (PARAO)* Latitude *07° 20'*
Country *ISLANDS, PACIFIC OCEAN* Longitude *134° 29' E*

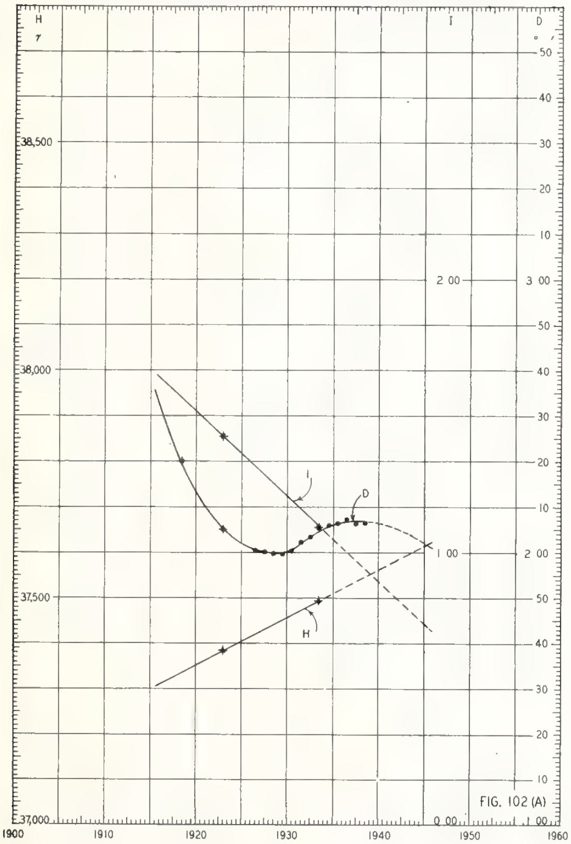

FIG. 102 (A)

VALUES OF X, Y, Z, AND F

Station *PALAU (PARAO)* Latitude *07° 20'*
Country *ISLANDS, PACIFIC OCEAN* Longitude *134° 29' E*

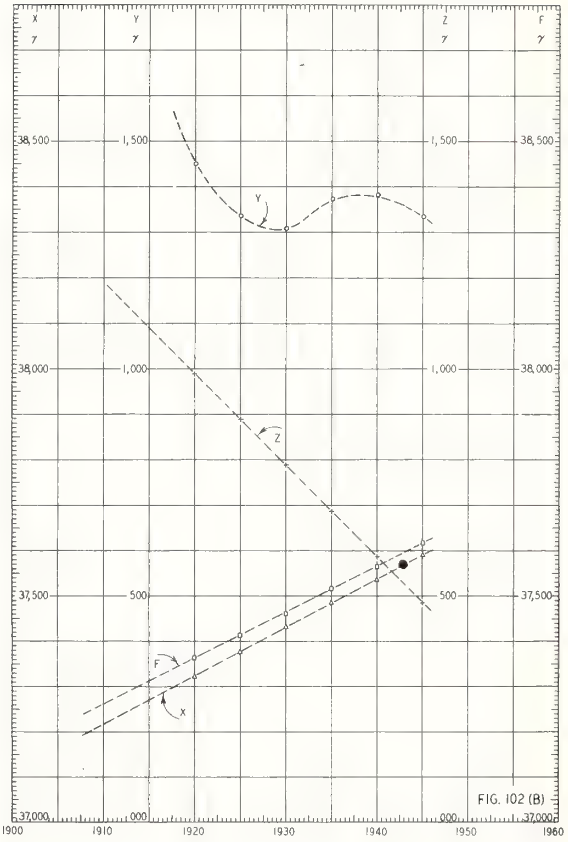

FIG. 102 (B)

VALUES OF D, H, AND I

Station *APIA (SAMOA)* Latitude *−13° 48′*

Country *ISLANDS PACIFIC OCEAN* Longitude *188° 14′ E*

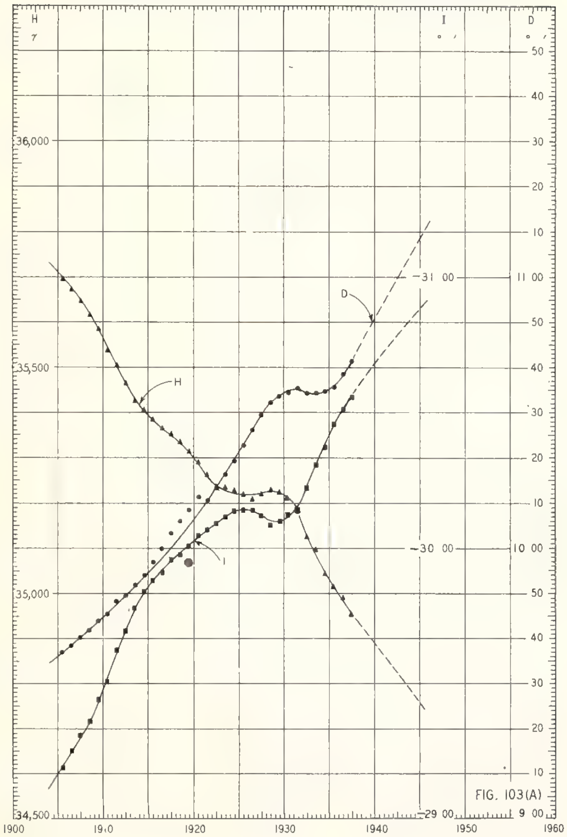

FIG. 103(A)

VALUES OF X, Y, Z, AND F

Station *APIA (SAMOA)* Latitude *−13° 48′*

Country *ISLANDS PACIFIC OCEAN* Longitude *188° 14′ E*

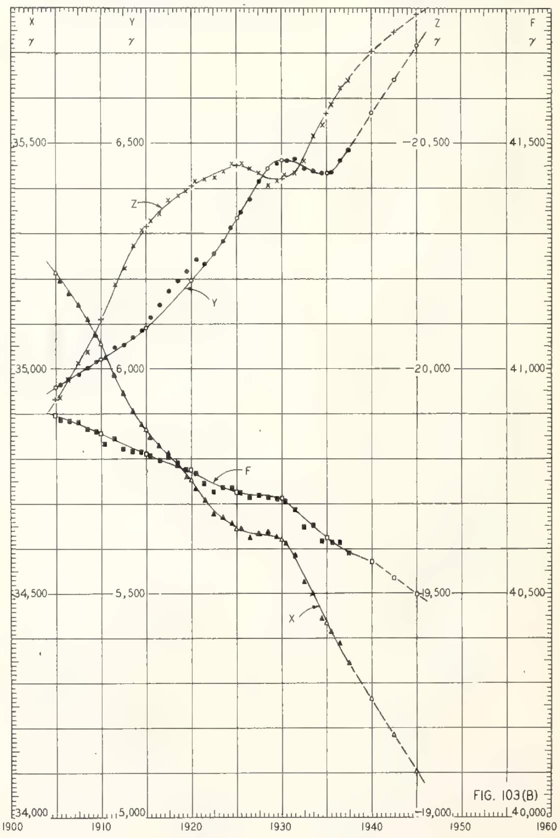

FIG. 103(B)

VALUES OF D, H, AND I

Station BAIE TICHAJA (CALM BAY) Latitude 80° 20′

Country FRANZ JOSEF LAND, ARCTIC OCEAN Longitude 52° 48′ E

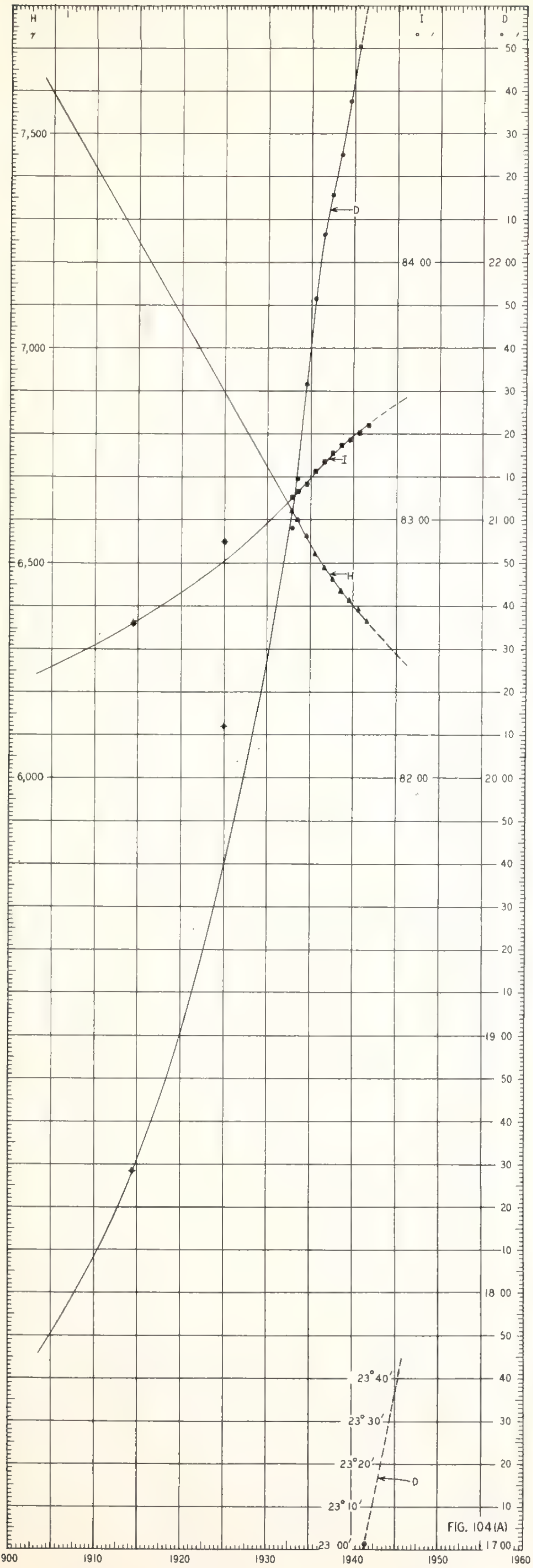

FIG. 104 (A)

VALUES OF X, Y, Z, AND F

Station BAIE TICHAJA (CALM BAY) Latitude 80° 20′

Country FRANZ JOSEF LAND, ARCTIC OCEAN Longitude 52° 48′ E

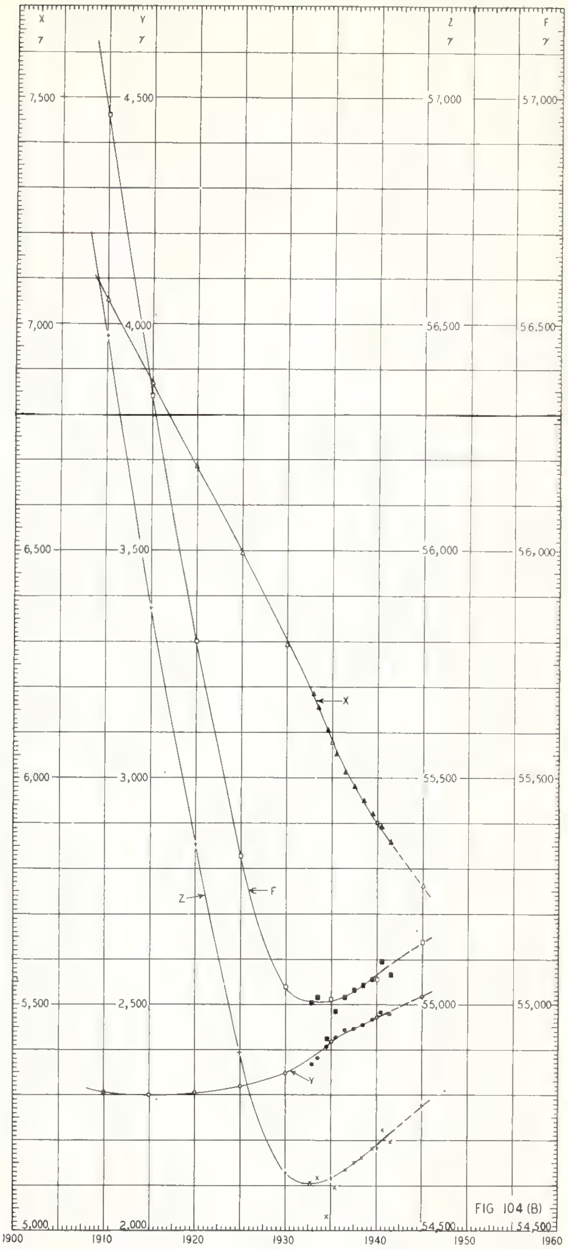

FIG 104 (B)

VALUES OF D, H, AND I

Station DAKAR Latitude 14° 42.0′

Country FRENCH WEST AFRICA Longitude 342° 34.0′ E

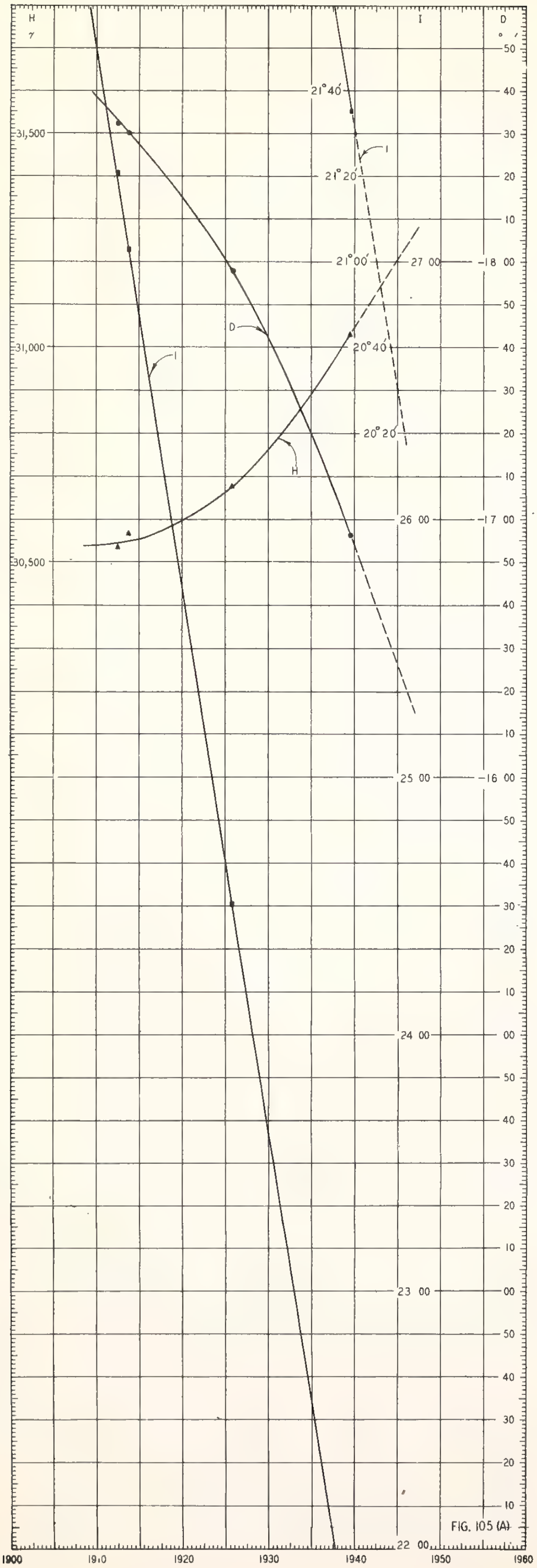

FIG. 105 (A)

VALUES OF X, Y, Z, AND F

Station DAKAR Latitude 14° 42.0′

Country FRENCH WEST AFRICA Longitude 342° 34.0′ E

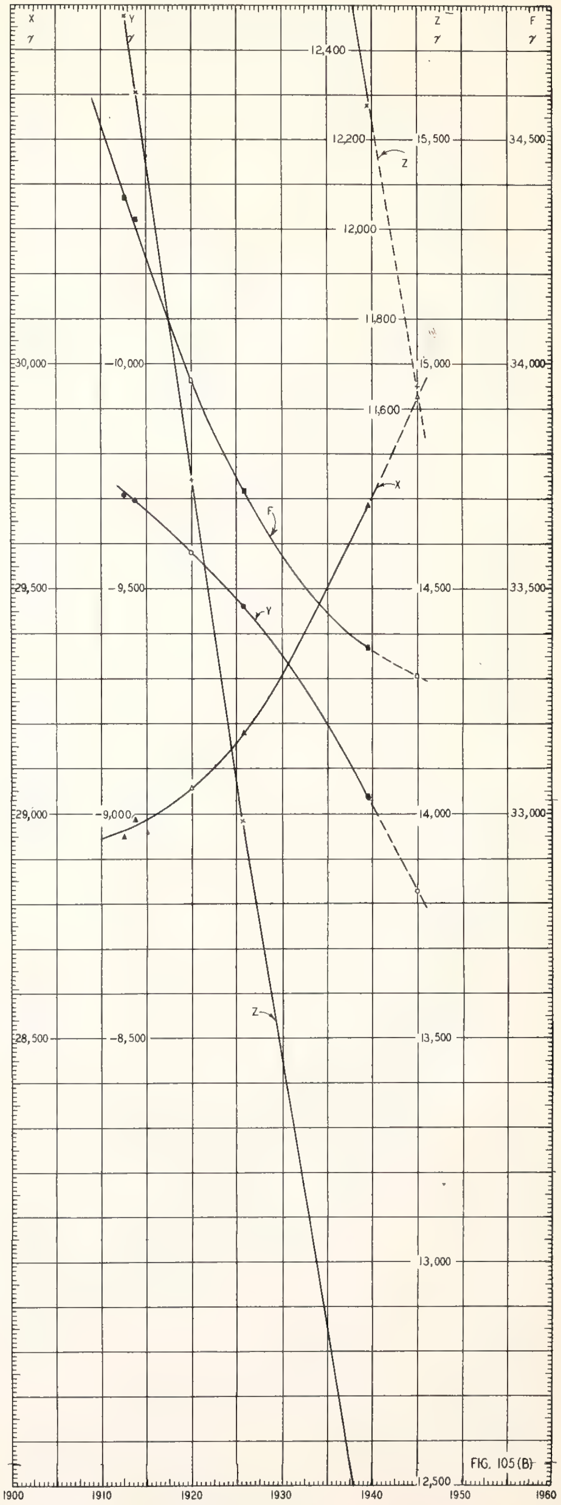

FIG. 105 (B)

VALUES OF D, H, AND I

Station *CROYDON* Latitude *-18° 13.1′*

Country *AUSTRALIA, AUSTRALASIA* Longitude *142° 14.4′ E*

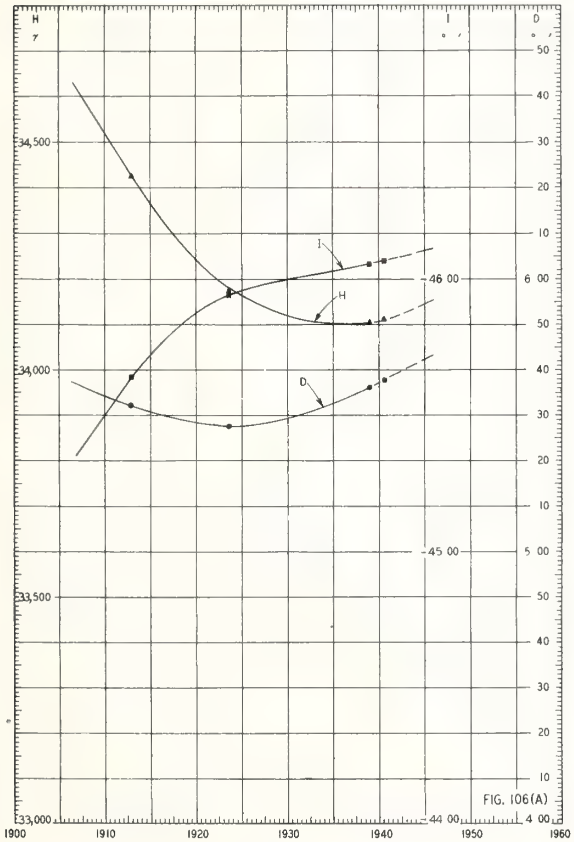

FIG. 106(A)

VALUES OF X, Y, Z, AND F

Station *CROYDON* Latitude *-18° 13.1′*

Country *AUSTRALIA, AUSTRALASIA* Longitude *142° 14.4′ E*

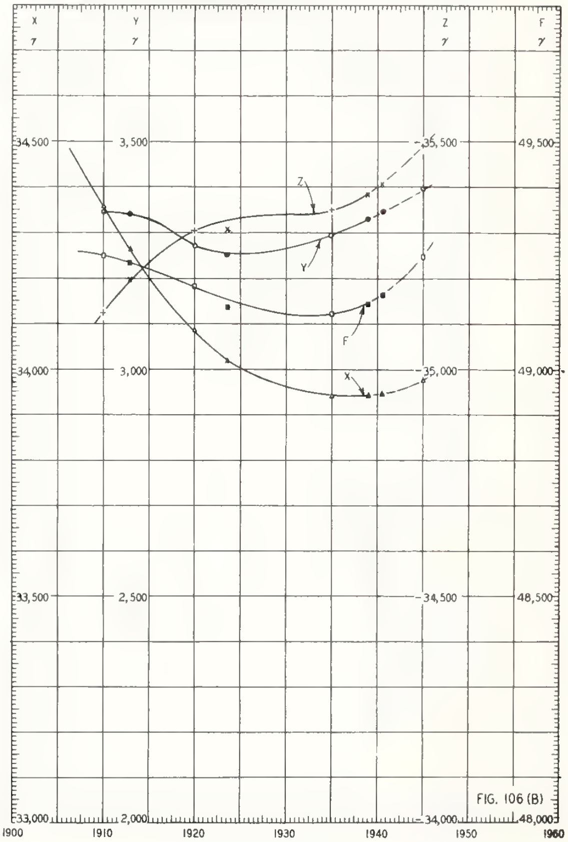

FIG. 106 (B)

VALUES OF D, H, AND I

Station *THULE (NORTH STAR BAY)* Latitude *76° 34.3′*
Country *GREENLAND* Longitude *291° 11.0′ E*

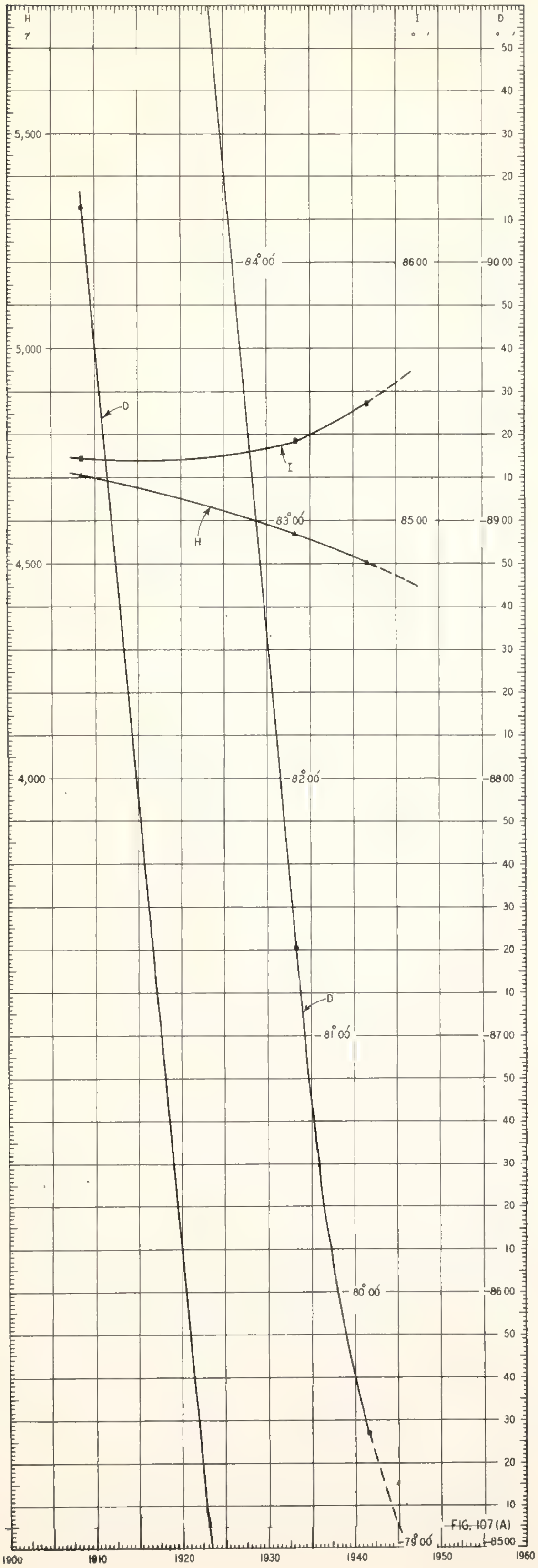

FIG. 107 (A)

VALUES OF X, Y, Z, AND F

Station *THULE (NORTH STAR BAY)* Latitude *76° 34.3′*
Country *GREENLAND* Longitude *291° 11.0′ E*

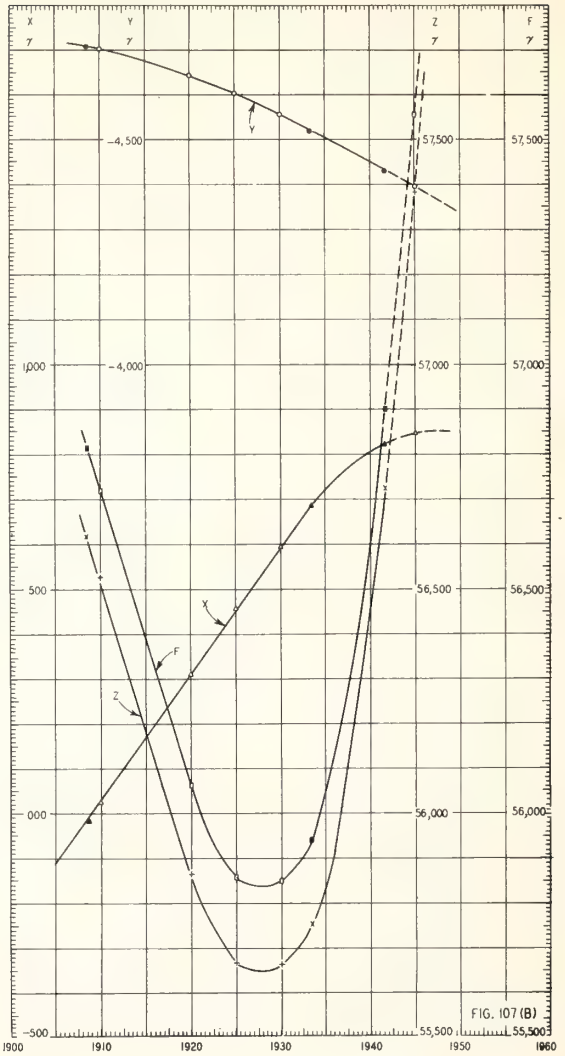

FIG. 107 (B)

VALUES OF D, H, AND I

Station ANGMAGSSALIK Latitude 65° 36.7′

Country GREENLAND Longitude 322° 22.0′E

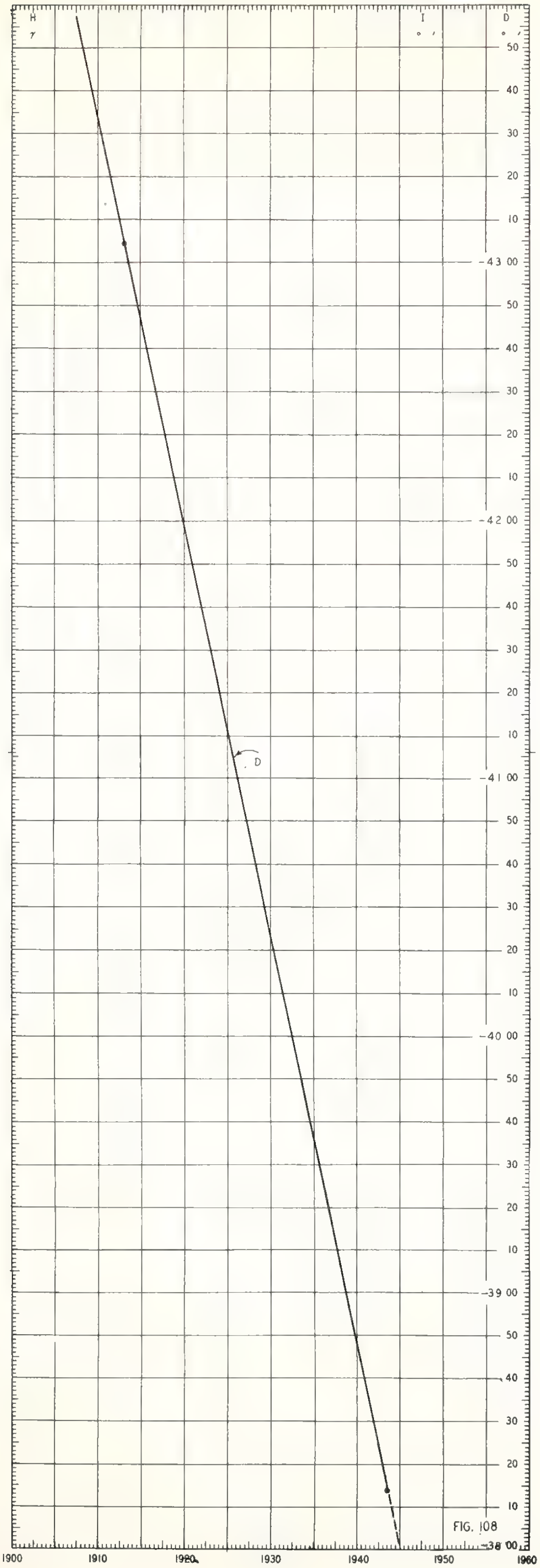

FIG. 108

VALUES OF D, H, AND I

Station CHURCHILL Latitude 58° 44.7′

Country CANADA Longitude 265° 45.5′ E

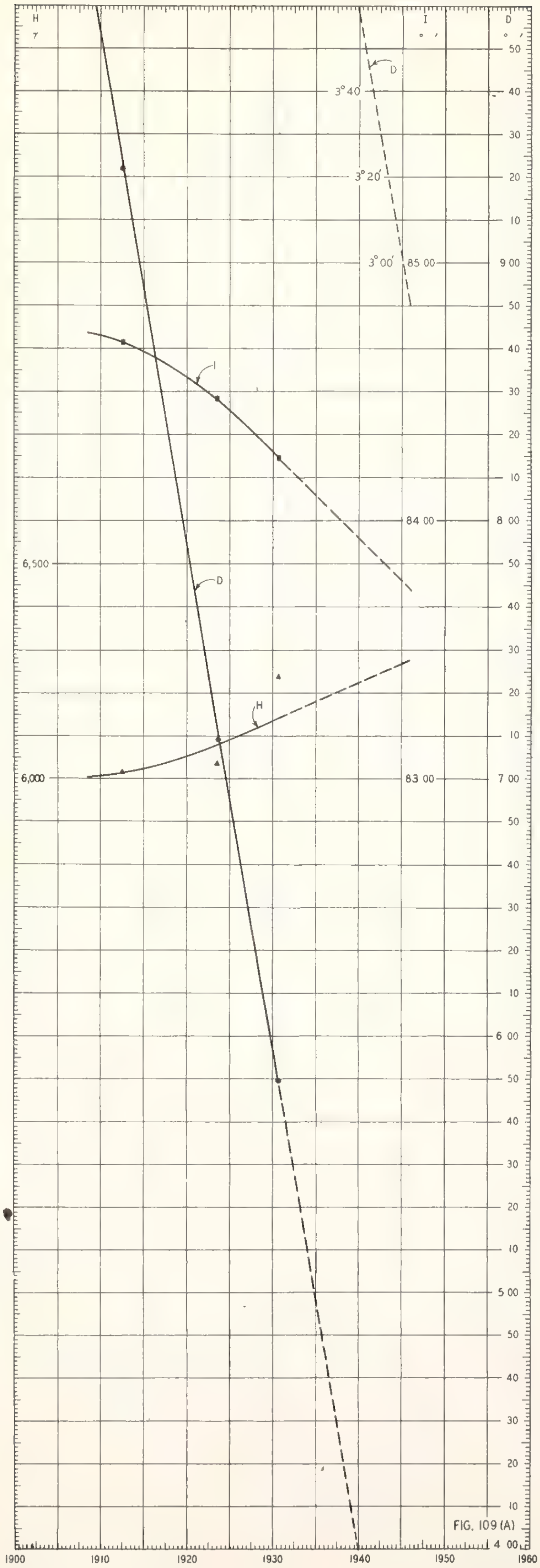

FIG. 109 (A)

VALUES OF X, Y, Z, AND F

Station CHURCHILL Latitude 58° 44.7′

Country CANADA Longitude 265° 45.5′ E

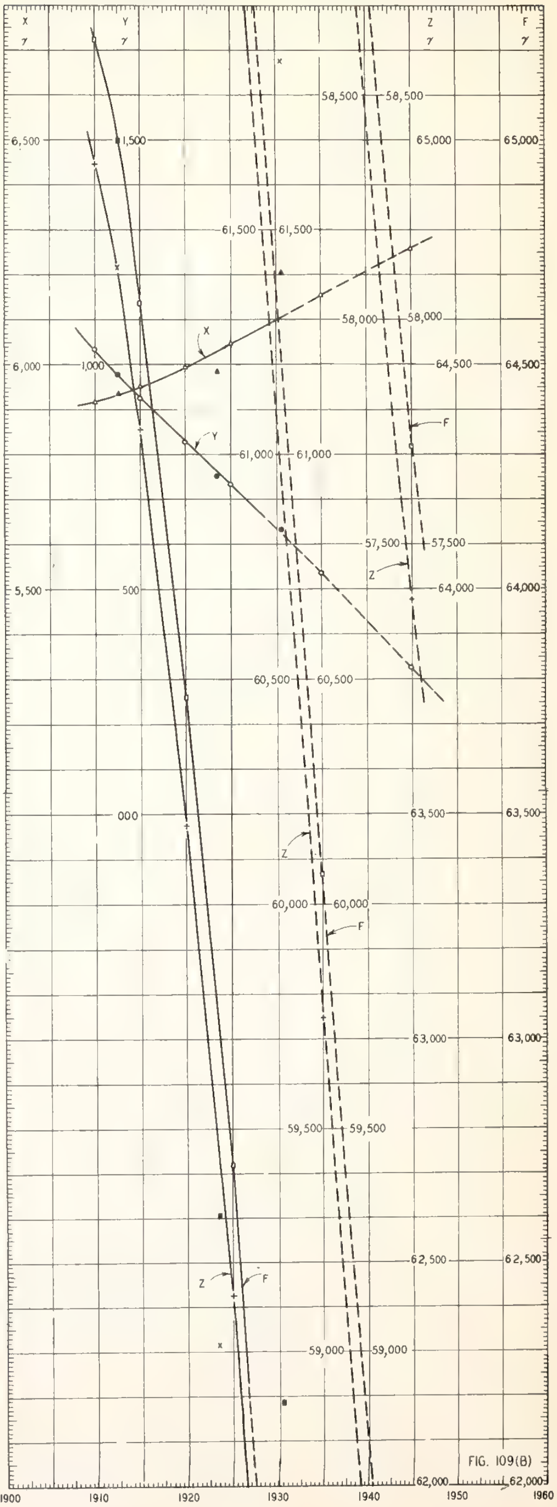

FIG. 109(B)

VALUES OF D, H, AND I

Station *DUTCH HARBOR* Latitude *53° 53.0′*
Country *ALASKA* Longitude *193° 28.0′ E*

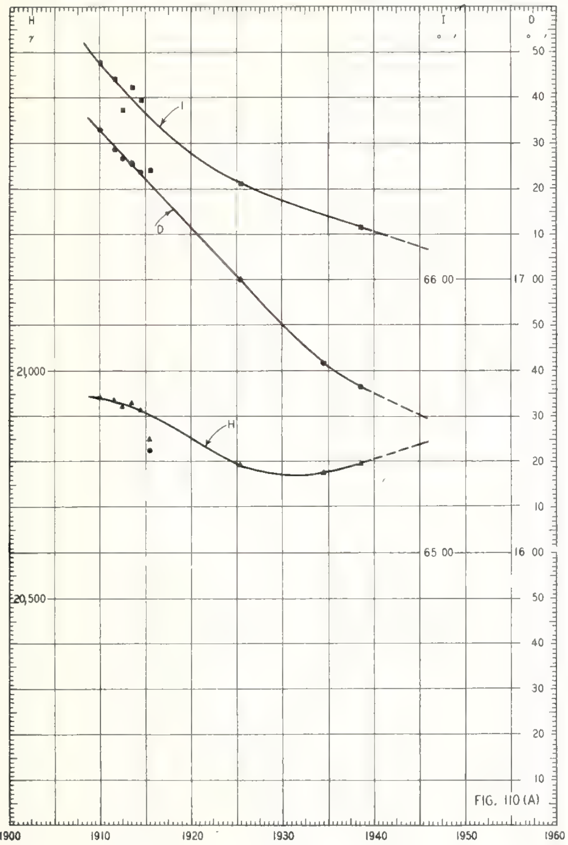

FIG. 110 (A)

VALUES OF X, Y, Z, AND F

Station *DUTCH HARBOR* Latitude *53° 53.0′*
Country *ALASKA* Longitude *193° 28.0′ E*

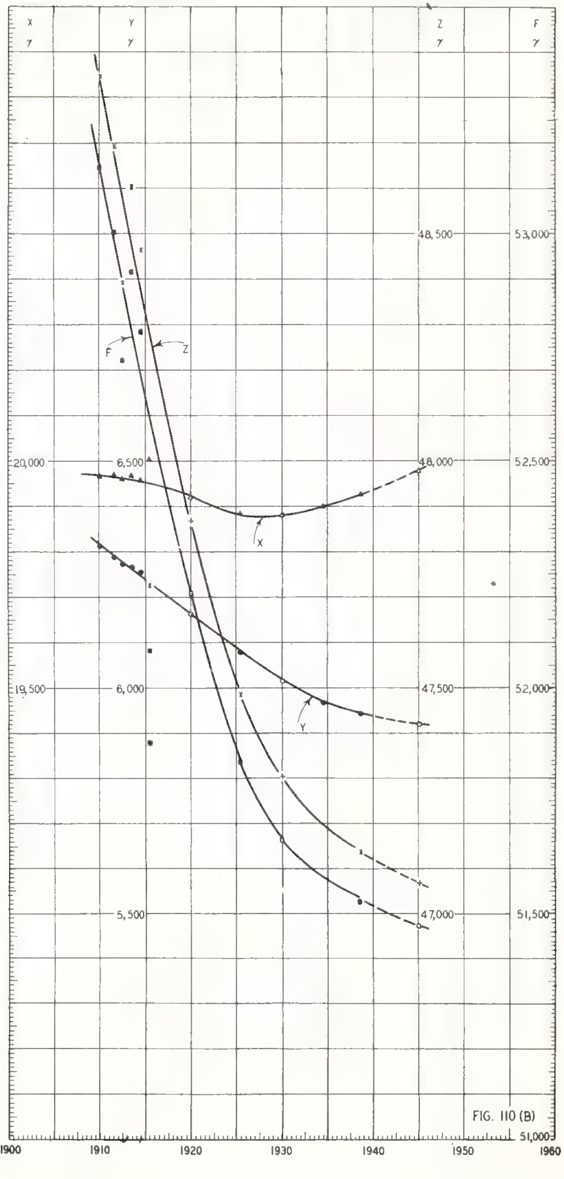

FIG. 110 (B)

VALUES OF D, H, AND I

Station *MACQUARIE ISLAND* Latitude *-54° 30.0'*
Country *ISLANDS PACIFIC OCEAN* Longitude *158° 57.0' E*

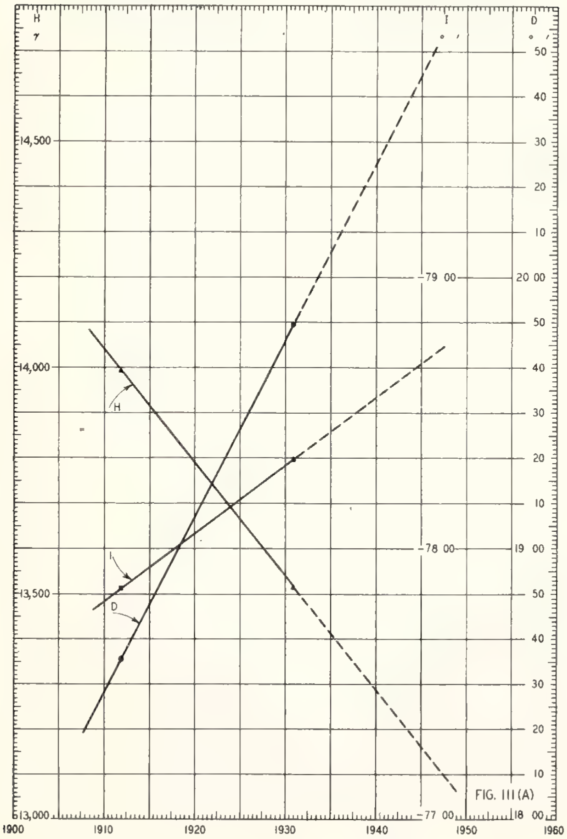

FIG. III (A)

VALUES OF X, Y, Z, AND F

Station *MACQUARIE ISLAND* Latitude *-54° 30.0'*
Country *ISLANDS PACIFIC OCEAN* Longitude *158° 57.0' E*

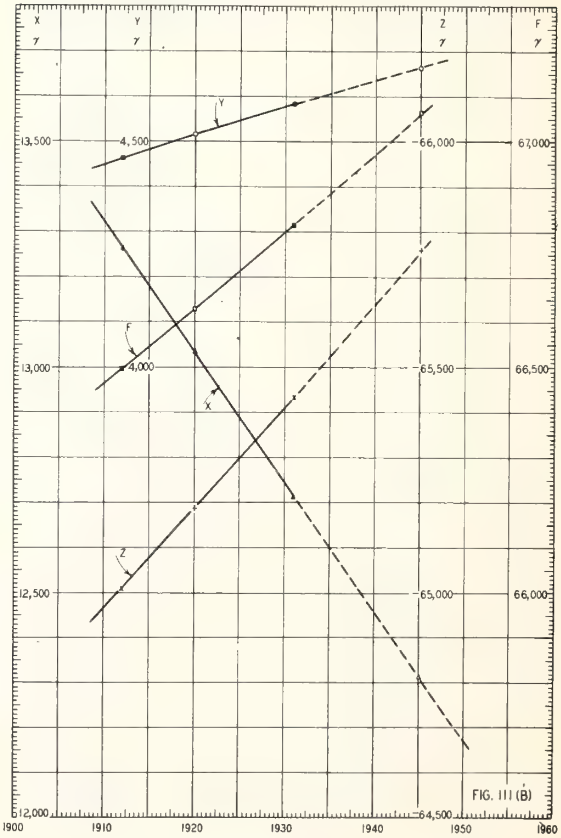

FIG. III (B)

VALUES OF D, H, AND I

Station PORT JEANNE D'ARC–OBSER. BAY–KERGUELEN Latitude –49° 25.0′

Country ISLANDS ANTARCTIC Longitude 69° 55.0′ E

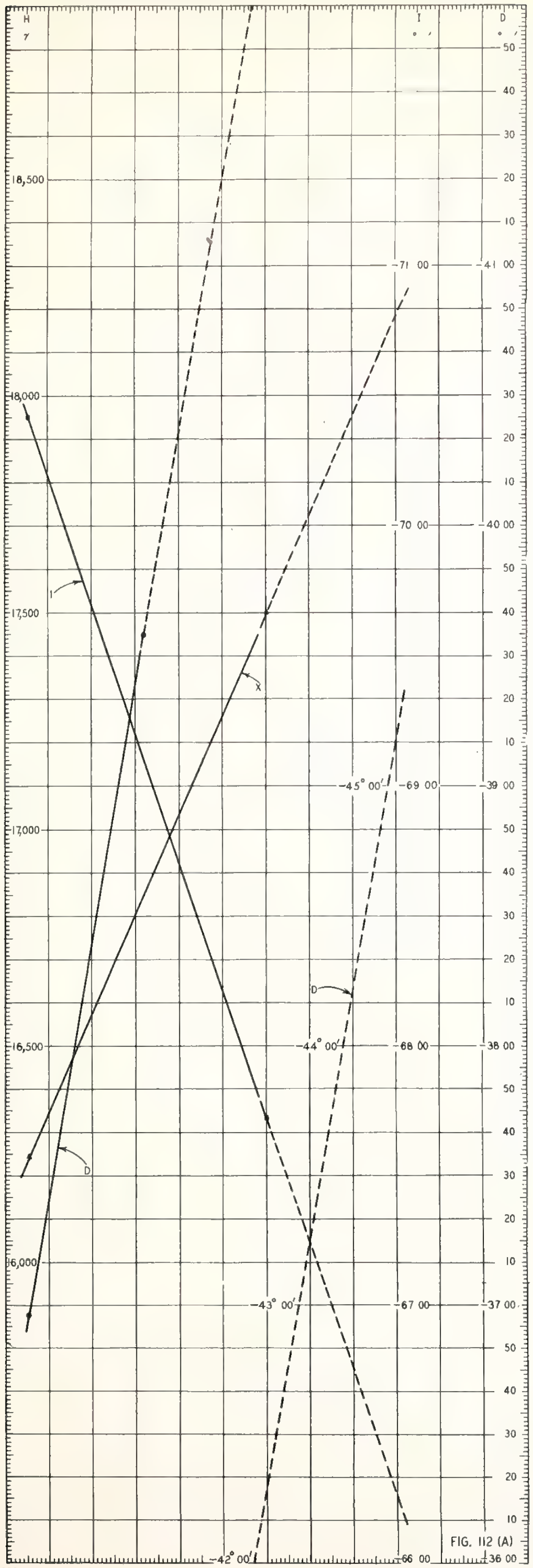

FIG. 112 (A)

VALUES OF X, Y, Z, AND F

Station PORT JEANNE D'ARC–OBSER. BAY–KERGUELEN Latitude –49° 25.0′

Country ISLANDS ANTARCTIC Longitude 69° 55.0′ E

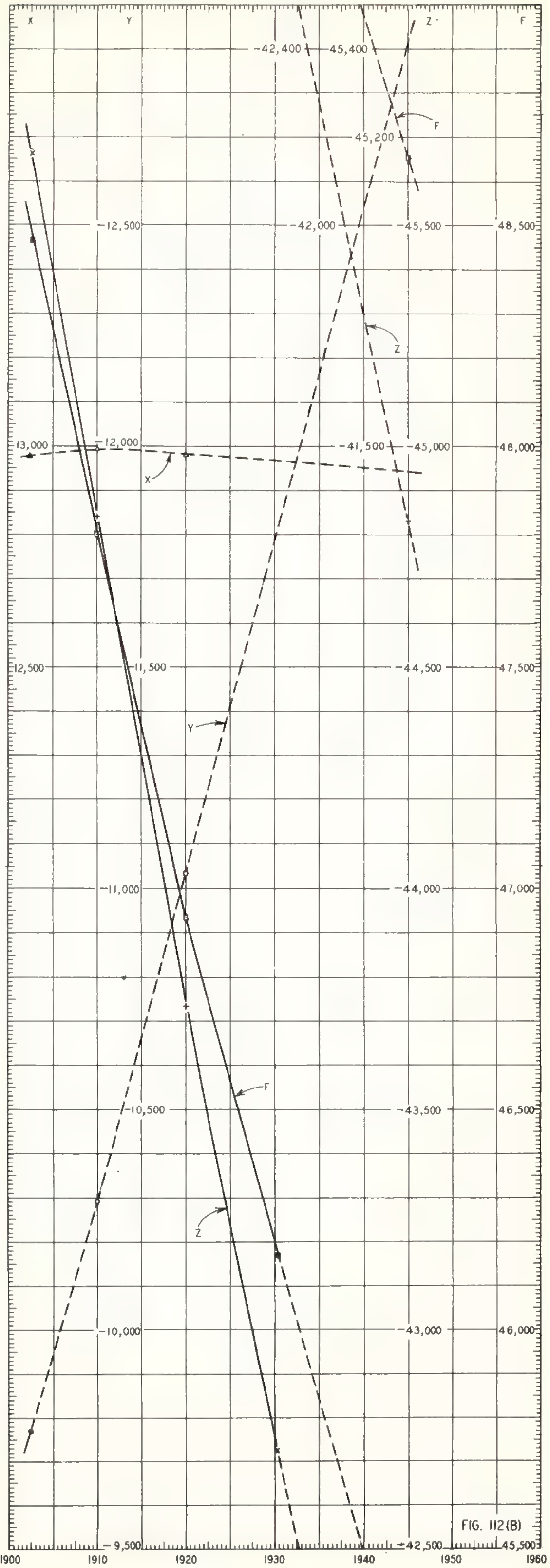

FIG. 112 (B)

VALUES OF D, H, AND I

Station CAPE DENISON Latitude −67° 00.0′

Country ADELIE LAND, ANTARCTICA Longitude 142° 40.0′ E

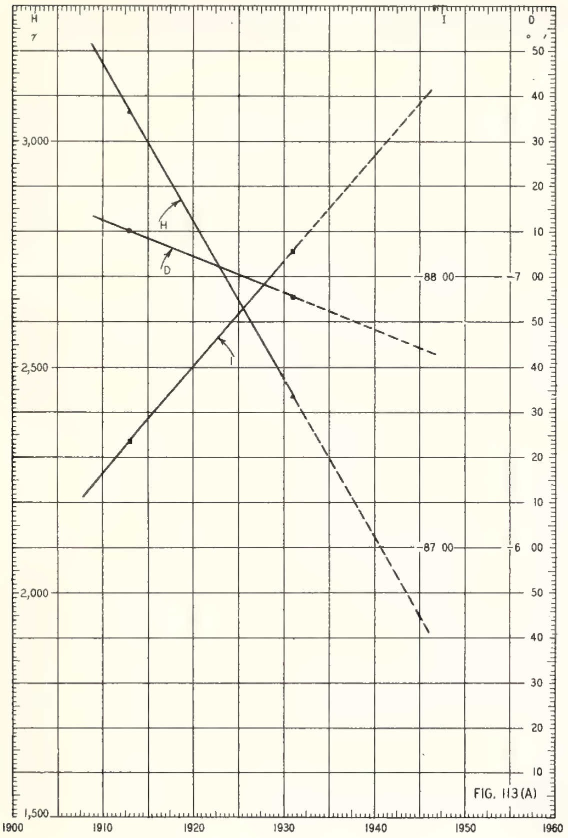

FIG. 113 (A)

VALUES OF X, Y, Z, AND F

Station CAPE DENISON Latitude −67° 00.0′

Country ADELIE LAND, ANTARCTICA Longitude 142° 40.0′ E

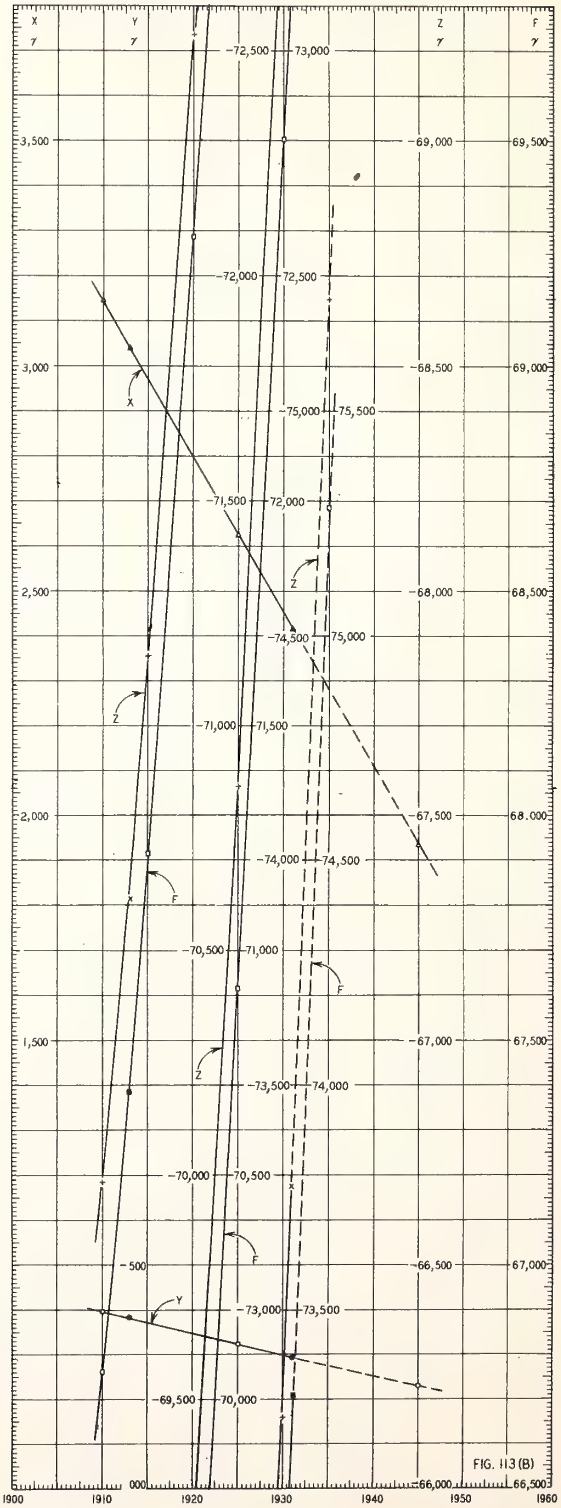

FIG. 113 (B)

VALUES OF D, H, AND I

Station *CAPE EVANS* Latitude *-77° 38.0'*
Country *ROSS ISLAND, ANTARCTICA* Longitude *166° 24.0' E*

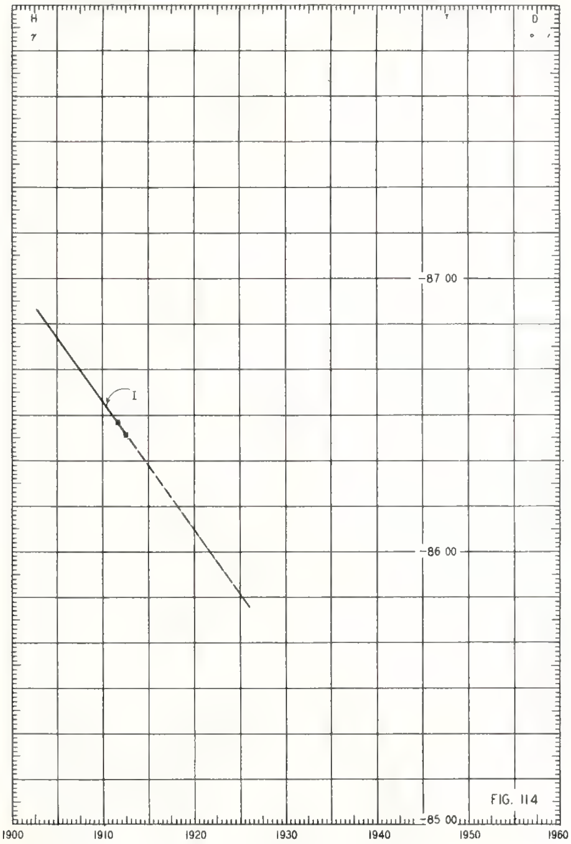

FIG. 114

VALUES OF D, H, AND I

Station LITTLE AMERICA Latitude -78° 29.0′

Country ROSS SEA, ANTARCTICA Longitude 196° 10.0′ E

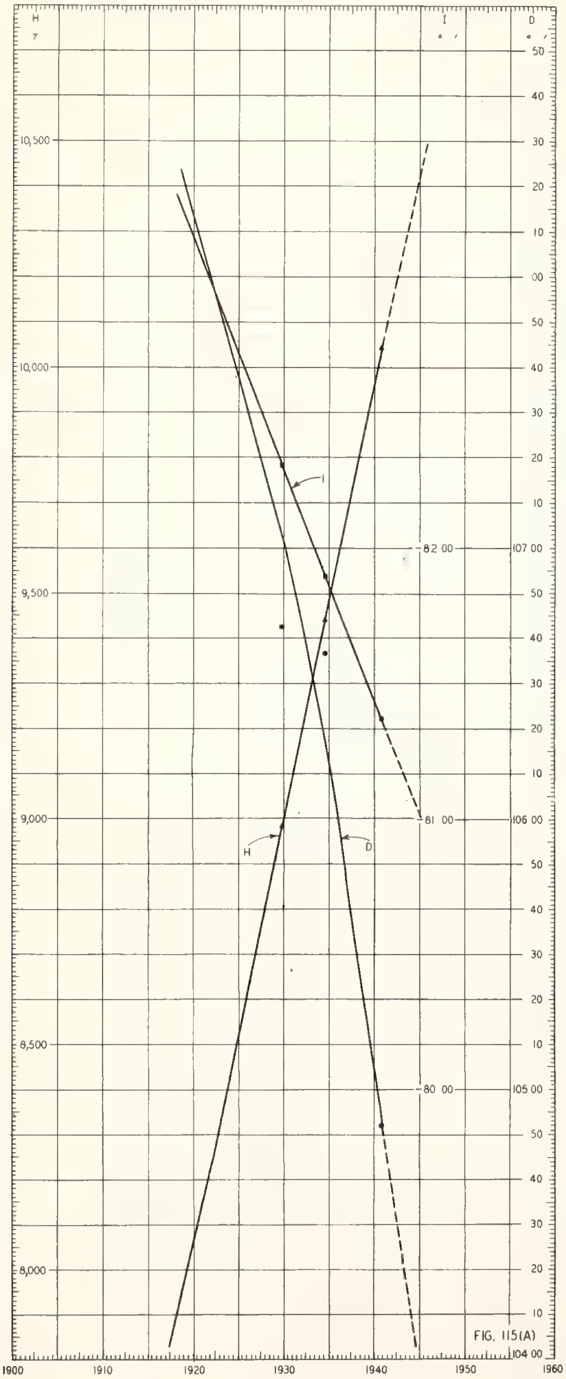

FIG. 115(A)

VALUES OF X, Y, Z, AND F

Station LITTLE AMERICA Latitude -78° 29.0′

Country ROSS SEA, ANTARCTICA Longitude 196° 10.0′ E

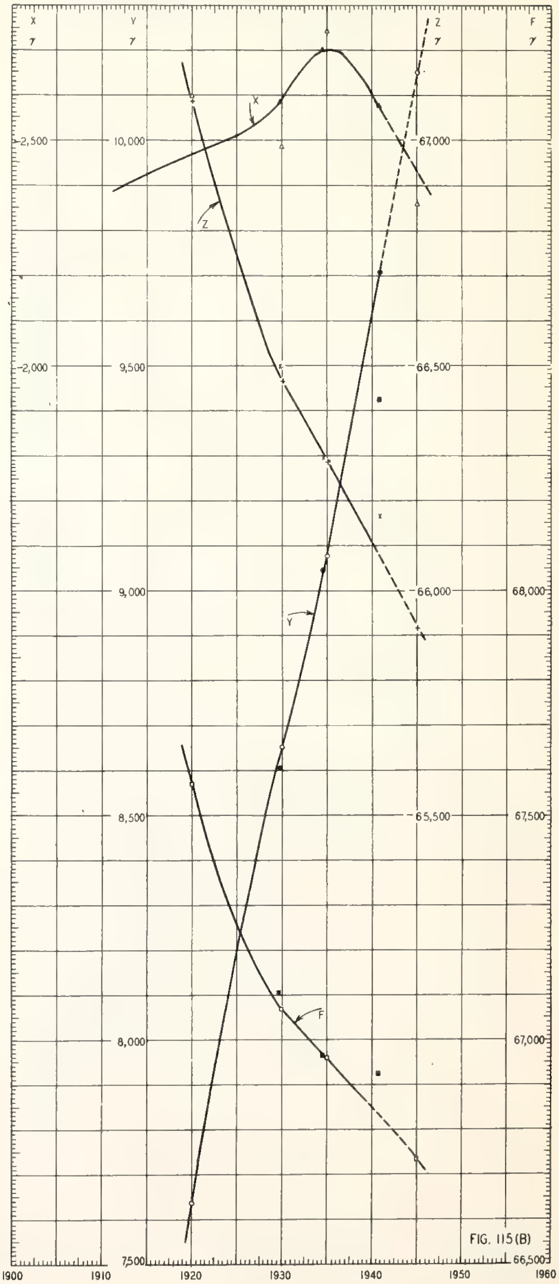

FIG. 115(B)

CHAPTER VI

ISOPORIC CHARTS, 1912.5, 1922.5, 1932.5, AND 1942.5, ALL ELEMENTS

1. Preliminary remarks.--Fisk[3] has published isoporic charts showing the change each year in all components of the Earth's main field except X and Y for the epoch 1920-1925. In this preliminary study, he did not eliminate certain influences of variations of extraneous character. As he stated in his papers, the treatment and data relating to isoporic values in high latitudes were inadequate, particularly near the positions of singular points in field. In a recent series of articles, Chapman[4] has indicated the need for some corrections for difficulties of the latter kind (which seem applicable to almost all previously constructed isoporic charts). Graphs of repeat-station values were in general not drawn by Fisk, and for these there were substituted direct differences in observed values, with consequent reduction in accuracy. The original plotting sheets for the maps show considerable variability in results for adjacent stations. Tests of these charts have shown rather large values for line-integrals of the east component of field along parallels of latitude and for the vertical component of curl.

Fisk's charts nevertheless were very valuable, being the first made available on a world-wide basis with reasonable completeness. They filled an immediate need of magnetic cartographers by providing reasonable and timely estimates of secular change derived chiefly from the contemporary surveys of this Department on land and especially over the oceans. They gave, even if only for the epoch 1920-1925, the annual changes in the various components of the geomagnetic field. Thus a cartographer, possessing a chart which he judged to be a sufficiently accurate representation of the main field for epoch 1922, would merely add the values of annual change multiplied by a suitable number to obtain the contour-lines for a later epoch, applying in addition some rough checks based on later results from magnetic surveys and observatories at a small number of scattered points. By 1940, however, this type of extrapolation had seriously affected the accuracy of a number of important isomagnetic charts for studies of the Earth's main field and for navigation by sea and air, and the absence of ocean observations after the destruction of the nonmagnetic survey-vessel Carnegie in 1929 aggravated the condition.

From a cartographer's point of view, it is highly desirable to have available reasonably accurate estimates of secular change at as many epochs as possible during several decades. With such information at hand, a survey-measurement made in 1910, for example, but not repeated, may serve to give a chart-value for the current epoch, say 1945. It should be noted, however, that a value derived in this manner for the current epoch for a main field chart will not be of great accuracy. This is true because construction of the chart for the main field for the current epoch requires not only knowledge of the reasonably accurate estimates of secular change derived for early epochs but also the current estimates of secular change for the current epoch, and the latter estimates cannot be of high accuracy because knowledge is lacking of secular trends. Still less accuracy will be obtained if, instead of estimates for the current epoch, estimates are made for an epoch some years in the future. Isoporic charts for the current or a future epoch, based on estimates of secular change of only fair accuracy, do not furnish the logical starting point or the data for a main-field chart which someone might wish to construct a decade later. Instead, use should be made of the original survey-measurements and revision should be undertaken of existing secular-change estimates on the basis of latest available information, in order to avoid cumulative errors, both accidental and systematic, which might seriously affect the chart accuracy. This procedure requires some effort, and even then some uncertainties will still remain. It is for this reason that high-speed world-surveys, such as might be made by airplanes, with complete coverage of the Earth in a year or two and repeated every decade, are the hopeful dream of those responsible for future isomagnetic charts. For various reasons, this ideal may not be realized soon and initial difficulties in precision of measurement are to be expected. It is also likely that isoporic charts, even though at first not easily constructed from measurements by air, will be required for many years to come. Hence magnetic surveys on land and sea by tried and tested methods, with adequate studies of secular change, should wisely be arranged to overlap the period of exploratory transition to more modern methods of measurement.

We may now discuss the newly-derived isoporic charts applying to epochs at 10-year intervals based on scalings of the graphs for repeat stations and observatories as described in the previous sections. We shall first consider the construction of preliminary isoporic charts $\dot{D}$ and $\dot{H}$, and $\dot{X}$ and $\dot{Y}$. The tests used and adjustments to final mutually consistent form will next be noted. The construction of a preliminary isoporic chart for vertical intensity will be described, with indication of benefits, especially in high latitudes, derived from calculated values for $\dot{Z}$ using spherical harmonic analyses of charts already completed for $\dot{X}$ and $\dot{Y}$. Finally, particulars will be given respecting construction of charts for the remaining elements $\dot{I}$ and $\dot{F}$. In a later volume, computed charts for the potential and vertical gradients of secular change will be discussed and a few tables of values will be presented.

2. Construction of preliminary isoporic charts, $\dot{D}$, $\dot{H}$, $\dot{X}$, and $\dot{Y}$.--For each of the four horizontal components of secular change values from Form 19.3, Figure 5, Chapter V, were entered on world Mercator and polar azimuthal equidistant base-maps as furnished by the United States Hydrographic Office for the four epochs 1912.5, 1922.5, 1932.5, and 1942.5. These data consisted of those from available magnetic observatories and repeat stations. Pencilled charts for each of the four epochs were drawn for $\dot{H}$ and $\dot{D}$, and values were scaled from them at each 10° interval of latitude and longitude. These scaled values were converted into values of $\dot{X}$ and $\dot{Y}$ for each of the four epochs; for this purpose tables of conversion-factors were prepared with the aid of British Admiralty world-charts of the main field for 1922 and 1942, roughly corrected as necessary for secular change on the basis of the present preliminary $\dot{H}$ and $\dot{D}$ charts.

The charts in $\dot{X}$ and $\dot{Y}$ were next drawn, employing not only all scalings of Form 19.3 but also the values of $\dot{X}$ and $\dot{Y}$ at 10° intervals of latitude and longitude computed from scalings made from the preliminary charts in $\dot{D}$ and $\dot{H}$. The latter values were of considerable assistance in drawing the isopors $\dot{X}$ and $\dot{Y}$ in some regions;

in other regions they were clearly incompatible with values of $\dot{X}$ and $\dot{Y}$ taken from Form 19.3. If patterns seemed better defined in $\dot{X}$ and $\dot{Y}$, values of $\dot{D}$ and $\dot{H}$ were computed and sections of the charts in $\dot{D}$ and $\dot{H}$ were examined and perhaps roughly redrawn. If the redrawing could not be done successfully, for instance, near nodal points or foci, further examination was made of the patterns in $\dot{X}$ and $\dot{Y}$. By such successive adjustments, satisfactory preliminary charts in $\dot{H}$, $\dot{D}$, $\dot{X}$, and $\dot{Y}$ were obtained.

3. Tests for mutual consistency.--The scalings at 10° intervals for $\dot{X}$, and for $\dot{Y}$ multiplied by sin θ, where θ is the colatitude, were next tested by means of line-integrals along meridians at 30° intervals of longitude in $\dot{X}$, and along parallels of latitude at 10° intervals of $\dot{Y}$ sin θ. These integrations were done graphically.

By successive trials, the charts in $\dot{X}$ and $\dot{Y}$ were altered mainly in polar and ocean areas where data were scanty, in order to reduce the line-integrals to nearly zero. In this work, the graphs used in numerical integration proved particularly helpful. Charts were thus obtained on which the line-integrals in $\dot{X}$ or $\dot{Y}$ were very small, except in one or two instances.

By means of formulas listed by Chapman,[4] scalings at 10° intervals of latitude and longitude from these charts were next used to compute the vertical component of the curl of the field in convenient arbitrary units. The values actually computed were those of the function

$$\dot{f} = [d\dot{X}/d\lambda + d(\dot{Y} \sin\theta)/d\theta] \operatorname{cosec}\theta \qquad (1)$$

where $\dot{X}$ and $\dot{Y}$ are, respectively, the north and east components of secular change expressed in gammas a year, θ the colatitude, and λ the east longitude. The preliminary values found are listed in Tables 2 to 5. It will be noted that the values are particularly large in the ocean and polar areas. In fact, there were numerous instances in which the two differentials of (1) were of the same sign, and therefore the charts in $\dot{X}$ and $\dot{Y}$ were incompatible for such locations.

Accordingly, the observational data were reviewed and the spacings of the contours modified. There were finally obtained with some difficulty small values of $\dot{f}$, and opposite signs for $d\dot{X}/d\lambda$ and $d(\dot{Y} \sin\theta)/d\theta$ at the listed locations. It is interesting to note in this connection that certain groups of observational values, not compatible with the smoothed isopors, fitted in rather satisfactorily after slight alterations were made in the pattern Thus the highly sensitive character of the curl test, which makes its application somewhat exacting and laborious, facilitated detection of need for change in pattern which, at times, was not apparent by inspection.

After the application of the curl test and subsequent alterations in line-configurations, mainly in regions where data were few, it was found that, because of alterations, the line-integrals in $\dot{X}$ and $\dot{Y}$ did not vanish along a few paths. Further adjustments were accordingly made, mainly near the intersections of such paths, with simultaneous application of the curl test. The results for $\dot{f}$ after the final adjustments are given in Tables 6 to 9. Those for line-integrals taken over the completed charts appear in Table 10.

4. Isopors in horizontal component near the magnetic poles.--While this work was in progress, a study was made of the configurations of isopors near the magnetic poles.

Chapman[4] has derived various analytical expressions describing the nature of isoporic charts near the magnetic dip-poles. His investigation revealed that the line-configurations of isopors shown on a number of world charts, issued by various agencies, were defective in important respects in those regions. Owing to inadequacy of the data, the existing charts were so deficient in necessary particulars that Chapman was unable to make much application of his theoretical results. These studies are extended here, although the accuracy of the results is considerably limited because of the paucity of reliable magnetic observations near the magnetic dip-poles. The uncertainties are liable to be reflected in glaring deficiencies in the isopors for the region until the results of detailed surveys are available near the dip-poles. Chapman's findings have also been extended here, mainly along lines facilitating the construction of isoporic charts at successive epochs, with somewhat more detailed inclusion of the changes in some of his functions with time.

We shall now consider the analytical description of isopors near the north magnetic dip-pole.

If we select as origin the dip-pole P_o, with horizontal axes x, y to the north and east, respectively, we may expand the Earth's magnetic potential V in the form

$$V = V_o + lx + my + (ax^2 + 2hxy + by^2)/2 + \ldots \qquad (2)$$

where V_o is the magnetic potential at P_o, and l, m, a, h, and b are constants at any instant of time. If the axes x, y, be rotated to coincide with the principal axes of the ellipses in H-contours near the pole, with x as major axis, (2) becomes

$$V = V_o + lx + my\ (ax^2 + by^2)/2 + \ldots \qquad (3)$$

Since the force components in the direction of these axes are $X_1 = -\partial V/\partial x = -ax$, $Y_1 = -\partial V/\partial y = -by$, we have

$$H^2 = a^2x^2 + b^2y^2 \qquad (4)$$

We cannot be said to know, on the basis of past observations, or from any present charts drawn therefrom, the detailed configuration of the H-contours in the general area surrounding the dip-pole. From (4), however, it is clear that very near the pole the H-contour may be taken to be elliptical. If we then assume that (4) continues to afford a good approximation throughout an area some hundreds of miles from the pole, observations made within this area may be used to evaluate the quantities a and b. This involves the assumption that the true H-contours when smoothed might be represented as a series of ellipses with fairly good approximation throughout the area.

In order to obtain the values of a and b in (4) on this basis, observations made from 1900 to 1943 were plotted on maps drawn to a scale of one mm to one degree of latitude. Values of the components X_1 and Y_1 taken along directions approximately parallel to the major and minor axes, respectively, of the nearby elliptical contour H = 0.02 of the British Admiralty chart for 1922 were derived for each station, taking P_o as the usually adopted position of pole at epoch 1904.5. The distances x and y for each station were measured in mm, and the values a and b were obtained by the method of least squares. This rough procedure neglected shift of the pole during the interval and change in orientation of the H-ellipses, but the data seemed insufficient to justify consideration of a shorter observational period. The solution gave $a = 37.5$, $b = 62.5$ for the scale of chart used, with a considerable probable error in the value of either a or b as was evident by inspection. However, it seemed that these values of a and b, though defective, were likely to be superior to those which might be obtained from any isomagnetic charts known, because it was felt that they were based on more data than any values used heretofore.

Observations at 17 to 22 repeat stations previously graphed were next used to estimate, from scalings and a least squares adjustment as before, the parameters of the secular changes

$$\left.\begin{aligned} -\dot{X}_1 &= \dot{l} + \dot{a}x + \dot{h}y \\ -\dot{Y}_1 &= \dot{m} + \dot{h}x + \dot{b}y \end{aligned}\right\} \qquad (5)$$

obtained by differentiating (2). The following results were obtained, referred to P_o as origin

$$-\dot{X}_1 = -19.0 + 0.009x + 0.108y$$

$$-\dot{Y}_1 = -5.4 + 0.108x + 0.018y$$

for epoch 1912.5;

$$-\dot{X}_1 = -21.1 - 0.020x + 0.101y$$

$$-\dot{Y}_1 = -3.5 + 0.101x + 0.004y$$

for epoch 1922.5;

$$-\dot{X}_1 = -24.8 - 0.067x + 0.114y$$

$$-\dot{Y}_1 = -4.0 + 0.114x - 0.026y$$

for epoch 1932.5; and

$$-\dot{X}_1 = -21.7 - 0.056x + 0.073y$$

$$-\dot{Y}_1 = -5.2 + 0.073x - 0.060y$$

for epoch 1942.5, where $\dot{X}_1$ and $\dot{Y}_1$ are in gammas a year, and x and y are distances in units of one degree of latitude. It will be noted that the horizontal component of secular change during this period depended mainly on $\dot{l}$, $\dot{m}$, and $\dot{h}$, and very little on $\dot{a}$ and $\dot{b}$. Thus this calculation suggests that the variations with time in a and b over the past few decades may be neglected for our purposes. The agreement at various epochs for the values $\dot{l}$, $\dot{m}$, and $\dot{h}$ is surprisingly good, and examination of the graphs of repeat stations reveals fairly steady rates of secular change. However, the values of $\dot{l}$, $\dot{m}$, and $\dot{h}$ are obtained from scalings of different parts of the same smoothed curves at each repeat station and hence are not independently determined at successive epochs. The probable error is actually likely to be large.

Adopting then the foregoing values of a, b, $\dot{l}$, $\dot{m}$, $\dot{h}$, $\dot{a}$, and $\dot{b}$, we may calculate the isopors throughout the area near the dip-pole. The error due to neglect of higher order terms of (2) will of course increase with increasing distance from the pole.

It will be noted that the foregoing expressions are all referred to the pole P_o of 1904.5 as origin, with the P_o x-axis inclined at the angle 7°.5 west of north and y positive to the west. However, this pole will not be stationary if the secular change in the horizontal component is not zero. It is clear from (5) that if $\dot{l}$ and $\dot{m}$ are not both zero the pole will migrate with time. However, if the pole migrates at a rapid rate, since $\dot{a}$ and $\dot{b}$ seem to be small, some improvement in the calculated isopors at various epochs might be expected by supposing the equation $H^2 = a^2x^2 + b^2y^2$ referred, as is proper, to a shifting origin P_o, even though $\dot{a}$ and $\dot{b}$ are neglected. Hence we require the positions of P_o at epochs 1912.5, 1922.5, 1932.5, and 1942.5 before proceeding with our calculations of isopors.

The velocity of the pole at any instant is given at the variable point P_o by $\dot{x}_o = \dot{X}_1/a$, $\dot{y}_o = \dot{Y}_1/b$, where $\dot{x}_o$ and $\dot{y}_o$ are the component velocities in the x - and y - directions at P_o. Since $\dot{X}_1$ and $\dot{Y}_1$, as estimated from observation, are given at various epochs by (5), we may compute $\dot{x}_o$, $\dot{y}_o$ throughout the interval for which our results are applicable. But our values of a and b, mainly based on observations made at some distance from the pole, are expected to be more accurate at greater distances from the pole than at the pole itself. Moreover, the calculated velocities may assist in indicating only the shift in pole-position from that for 1904.5, which is at best approximate.

Details of these approximate estimates of pole-position are somewhat lengthy and need not be given here. The quantities $\dot{l}$, $\dot{m}$, and $\dot{h}$ as given at successive epochs by (5) were graphed and expressed thereby as a linear function of time. On integration of $\dot{X}_1$, $\dot{Y}_1$ from time $t = o$ to t, these gave expressions for X_1 and Y_1 at any time t, assuming a and b constant. The remainder of the calculation was effected after some reductions by computing the coordinates of the point (x, y) at which X_1 and Y_1 would be zero. The calculated values found are listed in Table 11, together with corresponding estimates for south polar regions, derived in similar manner from results of secular change at four stations, and from Webb's isoclinics near the south magnetic pole.[5]

Also shown in Table 11 are the coordinates as estimated by the Astronomer Royal on the basis of results obtained on the plane Aries, mainly from observations made on a number of compasses. These suggest that our estimates of pole-position are in error, although the direction of migration of poles is roughly correct. This may mean that our estimates of a and b may be in error by 50 to 100 per cent at the pole, though perhaps more accurately applicable elsewhere in the neighborhood. Accordingly, for application in the construction of isoporic charts, the Astronomer Royal's position for 1945 was adopted. It was then assumed that the true shifts in position since 1904.5 were proportioned to those just calculated. The pole positions were then calculated and adopted for the various epochs of the charts.

In the case of south polar regions, there was unfortunately no possible check of this latter kind, and it will moreover be noted that our tentative calculations seem to indicate a more rapid shift with time of the south pole as compared with the north principal dip-pole.

It should also be noted that the positions of the principal dip-poles can probably best be estimated by detailed surveys with air-borne magnetometers; there may arise confusion because of local dip-poles when land surveys are undertaken with insufficient detail. Since local dip-poles occur in neighboring pairs,[4] they might be indicated in a detailed aerial magnetic survey, or reduced because of the height of flight to an insignificant phenomenon.

Positions of the dip-poles having been adopted, the equation of $\dot{D}$ is obtained from (3), (4), and (5) in the form

$$\dot{D} = -(X_1\dot{Y}_1 - Y_1\dot{X}_1)/H^2 \tan 1' \tag{6}$$

and that of the zero isopor in D along which the pole must move is obtained by equating (6) to zero, the origin of coordinates being shifted to the appropriate adopted positions of magnetic pole, with a and b assumed to be constant.

The isopors in H near the pole were calculated in a similar manner from the relation

$$\dot{H} = (X_1\dot{X}_1 + Y_1\dot{Y}_1)/H \tag{7}$$

The isopors in X and Y are of course available directly from (5) from computed values of $\dot{X}_1$ and $\dot{Y}_1$ resolved by drawing and adding components of these vectors along the north and east directions.

In these computations, as stated previously, it was found found convenient to retain the parameters of equation (5) referred to the pole P_o of 1904.5 as origin, using $H^2 = a^2x^2 + b^2y^2$ with shift in origin appropriate to each epoch.

The computed values were then entered on the isoporic charts, with some extrapolation and smoothing of isopors from adjoining regions to form a connected system.

5. Construction of isopors near other special points.--The isopors $\dot{X}$ and $\dot{Y}$ do not have singularities at the magnetic pole, nor does $\dot{H}$ at the geographic poles. The isopors $\dot{D}$, $\dot{X}$, and $\dot{Y}$ near the geographic poles were drawn using a formula due to Chapman,[4] after suitable extrapolation from lower latitudes, a procedure especially necessary in the case of the south geographic pole.

6. Isoporic charts in vertical intensity, inclination, and total intensity, epochs 1912.5, 1922.5, 1932.5, and 1942.5.--Values of the vertical component of secular change taken from Form 19.3 (Figure 5, Chapter V) were entered on base maps as in the case of the horizontal components. These values showed considerable variability at neighboring points, as was to be expected, since Z is seldom measured directly but derived from measurements of H and I. Thus, noting that Z = H tan I, the approximate error dZ in Z arising from observational errors dI and dH in I and H, respectively, is given by $dZ = H \sec^2 I \cdot dI + dH \tan I$, where dI is in radians. Also, because I = 0 at the magnetic equator, and I = ± 90° at the dip-poles, small errors in the measured values of I and H give rise to rapid increase of error in Z with increasing I, as I becomes large. For this reason, estimates of secular change in Z or F tend to become unreliable in high latitudes. In fact, the isopors pencilled in throughout low and middle latitudes could not be extended across the polar caps with any degree of confidence. It was therefore desirable to check the tentative line-configurations in $\dot{Z}$ for polar regions from spherical harmonic analyses of the charts in $\dot{X}$ and $\dot{Y}$. For this purpose, $\dot{X}$ and $\dot{Y}$ were analyzed separately, with weights for various latitudes similar to those employed by Dyson and Furner[6] in their analysis of the Earth's main field. The coefficients up to degree six found from $\dot{X}$ and $\dot{Y}$ independently were meaned and used to compute $\dot{Z}$. Further details of this work will be reported in a separate volume; the results only will be quoted here.

Tables 12 to 15 give the results in $\dot{Z}$ from spherical harmonic syntheses using the coefficients just mentioned. The data in the tables were obtained with IBM (International Business Machines) automatic (punched-card) machines. The computed values showed an average discrepancy over land areas in low and middle latitudes of about 10 to 15 gammas. This was considered highly satisfactory, especially since the computed values in $\dot{Z}$ would be expected to yield a smoother chart than that given by observational data, because of neglect of terms of degree higher than six. Accordingly, it is believed that valuable assistance was obtained by this way in preparing the final Z isopors, especially over the oceans and in high latitudes, and any contribution of a possible field in secular change, of original external to the Earth, seemed justifiably neglected. Moreover, there also appeared to be introduced the desirable feature of mutual consistency to good degree with the charts already drawn for $\dot{H}$, $\dot{D}$, $\dot{X}$, and $\dot{Y}$. One or two adjustments were made when the surface integral in $\dot{Z}$, taken over the sphere, did not vanish.

After completion of the charts in $\dot{Z}$, those for $\dot{I}$ and $\dot{F}$ were constructed with the aid of values computed from the charts in $\dot{H}$ and $\dot{Z}$ at 10° intervals of latitude and longitude, conversion-factors again being obtained from the British Admiralty charts of the main field for 1922, with suitable corrections for secular change, and from United States Hydrographic Office charts for 1940. Thus, as in the case of $\dot{Z}$, computed values were used to supplement the values estimated from observational data for all repeat stations and observatories.

7. New isoporic charts, $\dot{D}$, $\dot{H}$, $\dot{X}$, $\dot{Y}$, $\dot{Z}$, $\dot{I}$, and $\dot{F}$; four epochs.--Figures 116 to 143 show charts in $\dot{D}$, $\dot{H}$, $\dot{X}$, $\dot{Y}$, $\dot{Z}$, $\dot{I}$, and $\dot{F}$ at each of the four epochs 1912.5, 1922.5, 1932.5, and 1942.5, adjusted to mutual consistency and compatible with the present known character of the geomagnetic field. These afford a description of the secular change in the seven elements throughout the half century beginning in 1900. The charts for 1922.5 replace the previous charts of Fisk[3] in $\dot{D}$, $\dot{H}$, $\dot{Z}$, $\dot{I}$, and $\dot{F}$ for that epoch and are based on a considerably more exhaustive treatment of data; they also replace charts in $\dot{X}$ and $\dot{Y}$ computed from those of Fisk.

In general, there are marked secular changes near foci and sometimes near singular points. The foci may expand or contract, shift in position, strengthen or weaken during intervals of time as short as a decade. They reveal a rapidity of change with time unparalleled by any other known geophysical phenomenon, and probably originate in unexplored regions deep within the Earth's interior; these changes seem to be smallest over the Pacific Ocean.

Figures 116 to 119 show the isopors in declination at four epochs 10 years apart. A focus of decreasing intensity is shown over South America for 1912.5, which diminished in intensity at a more rapid rate in later epochs, with its focal point moving southward. A weak positive focus to the west has practically disappeared by 1942.5. The line-configurations in high latitudes are dominated by the marked changes near the magnetic poles. A positive focus in South Africa is shown in 1912.5 which has disappeared by 1942.5. A strong negative focus in the Indian Ocean, not well defined by available data at any epoch, is shown to have persisted with some change in form. A positive focus to the south has disappeared in 30 years. A weak positive focus is shown over the East Indies and Australia in 1912.5, which has intensified and shifted rapidly southwards in later epochs.

Figures 120 to 123 show isopors in horizontal intensity. Strong negative foci appear in Central America, in the South Atlantic, central Asia, and just west of Australia, in 1912.5. These have diminished markedly in intensity by 1942.5. In fact, only the South Atlantic negative focus seems well-preserved though diminished by about one-half in intensity. Various positive foci seem better preserved; one in northern South America seems to have coalesced into the North Atlantic focus.

Charts for $\dot{X}$ and $\dot{Y}$, shown in Figures 124 to 131, need not be described in detail, although they are of interest for purposes of interpretation, in conjunction with studies to be presented in a later volume.

Figures 132 to 135 show isopors in vertical intensity. There are huge positive foci in the Indian and Antarctic Oceans, and a great negative focus in the Atlantic in 1912.5. These have changed notably by 1942.5. Another striking feature is the growth and migration of the negative focus over the East Indies in 1912.5, which appears to have split the two positive foci to the west by 1942.5.

Figures 136 to 143 show isopors in inclination and total intensity, which likewise exhibit rapid changes in pattern within a few decades.

Additional charts have been constructed, giving the acceleration of secular change in each 10-year interval; but, since their general features will be apparent from inspection of the present charts, they have not been included here. In some instances they proved useful in the search for errors during earlier stages of map-construction.

On all of the charts mentioned, particular attention was given to drawing of isopors near singular points although nodal points were not marked as originally planned. The writers had also planned to construct all charts on a sphere, a procedure highly recommended, but suitable spheres were not obtainable during a time of war.

Values of secular variation in each element, for each of the four epochs, taken at 10-degree intervals of geographic latitude and longitude, are given in Tables 16 to 43.

The isoporic charts indicate clearly the need for fairly accurate knowledge of secular changes at frequent intervals in constructing isomagnetic charts of the main field. They also make possible the considerable use of earlier observations in the construction of current main-field charts.

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Table 2

Preliminary values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1912.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	-1	0	-1	0	+1	0	0	-1	-2
+50	0	0	0	0	0	-1	-1	-1	0
+40	0	0	+1	+1	0	-1	-1	+1	+1
+30	0	0	0	0	+1	0	0	0	+1
+20	+1	+1	-1	0	+1	+1	0	0	0
+10	0	0	0	0	+2	+2	0	0	+1
0	0	0	0	+1	+1	+1	0	+1	+2
-10	0	0	0	0	-2	-2	0	-1	-1
-20	+1	+1	0	0	-1	-1	0	0	0
-30	0	0	0	-1	-1	-1	+1	+2	+1
-40	-1	-2	+1	-1	-1	0	0	0	0
-50	+1	-1	0	0	+1	+2	+2	+2	..
-60	-1	0	0	0	+2	+3	+7	+5	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	-4	-2	0	0	0	0	+1	+1	+2
+50	-1	0	0	+1	+1	+1	+1	+1	+1
+40	0	0	0	+1	+1	+1	+1	0	0
+30	0	0	0	0	+1	+1	+1	0	0
+20	+1	0	-1	0	+1	0	0	0	0
+10	+1	0	0	0	0	0	-1	-1	-1
0	+3	+2	0	0	0	0	-1	0	-1
-10	0	0	0	0	-1	-1	0	0	0
-20	+1	0	0	0	-1	-1	0	0	-1
-30	+3	+2	+1	0	0	+1	+1	0	-1
-40	-1	+1	+2	+2	+1	+1	0	0	+1
-50	..	..	..	-1	-1	-1	0	-1	0
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

[a] North latitudes positive, south latitudes negative

Table 2--Concluded

Preliminary values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1912.5 expressed in gammas per year per degrees of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	+2	+2	+2	+1	0	0	+2	+1	0
+50	+1	0	0	0	0	+1	0	+1	0
+40	0	-1	0	0	+1	+2	0	0	0
+30	0	0	0	0	+1	+1	0	0	-1
+20	-1	-1	-1	0	+1	+1	-1	0	0
+10	0	0	0	0	0	+1	0	-1	-1
0	-1	0	0	0	0	-1	0	-1	-2
-10	-1	-1	0	+1	0	0	0	0	-1
-20	-1	0	+1	+1	+1	0	0	+1	0
-30	-1	0	+1	0	-1	-1	-1	-1	0
-40	0	-2	-1	0	-1	-1	-1	-1	-1
-50	0	0	0	0	0	-1	0	-1	0
-60	..	-1	0	0	0	0	0	0	0
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	-1	..	0	0	0	-1	-1	0	+1
+50	0	..	+1	+1	+1	0	0	-1	0
+40	0	0	0	0	+1	+1	+1	-1	-1
+30	-1	0	0	-1	-1	+1	+1	0	-1
+20	0	-1	0	+1	+1	0	+1	-1	+1
+10	0	0	0	0	-1	0	-1	0	0
0	-1	0	+1	+2	0	-1	+1	+1	0
-10	-2	0	0	-1	+1	+1	+2	+1	+1
-20	0	-1	-2	0	0	+1	+1	+1	+1
-30	0	-1	+1	0	0	0	0	+1	+1
-40	0	+1	+1	0	0	0	0	0	0
-50	0	0	0	-1	-2	-1	-2	-1	+1
-60	+1	+1	+2	0	-2	-3	-2	-2	-1
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

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[a] North latitudes positive, south latitudes negative

Table 3

Preliminary values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1922.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	-1	0	0	0	0	0	0	..	..
+50	-1	0	0	0	0	-1	-1	-1	+1
+40	-1	-1	0	0	-1	0	0	0	0
+30	-1	-1	-1	0	0	0	0	0	0
+20	0	0	0	0	+1	0	0	0	0
+10	0	0	+1	0	0	+1	0	0	0
0	0	-1	0	0	0	0	0	0	0
-10	0	-1	-1	-1	0	-1	-1	0	+1
-20	0	0	0	0	0	-1	0	+1	+3
-30	0	-1	0	-1	0	+2	+2	+3	+2
-40	0	0	-1	-2	0	+2	+2	+2	+1
-50	-2	-2	-2	-1	0	+1	+2	+1	0
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	..	-1	-1	-1	-1	0	+2	+2	+3
+50	0	0	-1	0	+1	+1	+1	+1	0
+40	-1	0	0	+1	+1	0	0	0	0
+30	+1	+1	+1	0	-1	0	0	-1	0
+20	+1	+1	0	0	+1	-1	-1	-1	0
+10	+1	+1	0	0	0	-1	-1	0	-1
0	+1	+1	0	0	0	0	-2	-1	-1
-10	0	-1	0	0	+1	+2	0	0	0
-20	0	-1	-1	0	0	+1	0	0	+1
-30	+2	-1	-1	-1	0	+1	0	0	0
-40	+2	0	-1	0	+1	+1	0	0	-1
-50	0	0	+1	0	-1	-1	0	0	+1
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

[a] North latitudes positive, south latitudes negative

Table 3--Concluded

Preliminary values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ' for epoch 1922.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	+2	+1	+1	-1	0	+1	0	0	-1
+50	0	0	0	0	0	0	0	-1	-1
+40	0	0	0	0	0	0	0	0	-2
+30	-1	0	0	0	0	+1	+1	0	0
+20	0	0	0	+1	0	+1	+2	+2	+1
+10	0	0	0	0	0	-1	0	0	+1
0	0	0	-1	0	0	0	-1	-1	0
-10	0	-1	+1	+1	+1	+1	+1	0	-2
-20	0	0	0	0	0	0	0	0	-1
-30	0	0	-1	-2	-1	-2	-1	-1	-1
-40	0	0	0	0	0	-1	-2	-1	-1
-50	0	0	0	0	0	0	-1	-1	0
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	-2	-1	+1	+2	-1	0	-1	0	0
+50	0	0	0	+2	0	0	0	0	0
+40	0	+1	0	-2	0	0	0	0	0
+30	0	+1	0	-2	0	0	0	+1	0
+20	+1	-1	-1	0	0	0	+1	0	0
+10	0	0	-1	0	0	0	0	0	0
0	-1	0	0	0	-1	0	0	0	0
-10	-2	-1	0	0	+1	+1	+1	+1	0
-20	-1	0	0	+1	+1	0	+1	+1	+1
-30	-1	0	0	+1	0	0	0	+1	+1
-40	-1	0	0	0	0	0	0	0	-1
-50	-1	0	0	-2	-1	0	+2	-1	+2
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

[a] North latitudes positive, south latitudes negative

Table 4

Preliminary values of $\mathring{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]\operatorname{cosec}\theta$ for epoch 1932.5 expressed in gammas per year per degrees of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	..	-1	+1	0	+1	0	0	0	0
+50	0	0	0	0	+1	0	0	0	0
+40	0	0	0	-1	+1	+1	0	-1	-1
+30	0	0	0	0	0	0	0	-1	0
+20	0	0	0	0	+1	0	0	+1	0
+10	-1	+1	0	+1	+1	0	-1	-3	+1
0	-1	-1	0	-1	-1	-1	-2	-1	+1
-10	-1	-1	-2	0	0	0	0	+2	0
-20	0	-1	-1	0	+1	-1	+2	+4	+2
-30	-1	0	0	+2	+2	+2	+4	+3	+3
-40	0	-1	-1	0	+1	+1	+2	..	+2
-50	..	..	..	..	..	..	..	..	..
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	0	-1	0	-2	0	+1	0	0	+2
+50	-1	-1	0	+1	0	0	-1	0	+1
+40	-2	-1	0	+2	0	0	0	0	0
+30	-2	-1	0	+1	0	0	+1	+1	0
+20	+1	0	+1	0	0	0	0	0	0
+10	+1	0	0	0	+1	+1	0	-1	0
0	+2	+2	0	-2	-1	0	0	-1	-1
-10	+1	+2	0	-1	-1	-1	0	-1	0
-20	0	-1	0	0	0	0	0	0	0
-30	+1	-1	-1	0	-2	+1	0	0	0
-40	+1	0	-3	-3	+3	..	0	0	+1
-50	..	..	..	..	..	..	..	..	..
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

[a] North latitudes positive, south latitudes negative

Table 4--Concluded

Preliminary values of $\mathring{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1932.5 expressed in gammas per year per degrees of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	+1	+1	0	0	0	0	-1	-1	-1
+50	+1	+1	0	0	0	0	0	0	0
+40	0	0	0	0	0	0	0	0	0
+30	0	0	0	0	0	-1	-1	-2	0
+20	0	0	0	+1	0	0	-1	-2	-2
+10	0	0	0	+1	0	+1	+1	+1	0
0	-1	-1	0	0	0	0	0	+1	+1
-10	-1	-1	-1	0	0	+1	+1	+1	+1
-20	-1	-1	-1	0	-1	0	+1	0	0
-30	-1	-1	-1	0	0	-2	-2	-2	-1
-40	0	0	0	0	-1	-2	-2	-1	-1
-50	..	..	..	..	..	..	..	..	..
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	-1	0	+2	+1	0	-1	-1	0	-1
+50	0	+1	+1	+1	0	+1	0	-1	-1
+40	0	+1	+1	-1	+1	+1	+1	0	0
+30	+2	0	-1	-2	0	0	+1	+1	+1
+20	-1	0	-1	-2	0	0	+1	0	0
+10	-1	0	-1	0	-1	0	-1	0	0
0	0	0	0	+1	0	0	0	0	0
-10	0	0	0	0	0	+1	+2	0	0
-20	0	0	0	0	+1	+1	+1	+1	0
-30	-1	0	0	+1	0	0	0	0	0
-40	0	0	0	0	0	0	0	0	0
-50	..	..	..	..	..	..	..	..	..
-60	..	..	..	..	..	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

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[a] North latitudes positive, south latitudes negative

Table 5

Preliminary values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]\operatorname{cosec}\theta$ for epoch 1942.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	+1	+1	+1	0	+1	+3	+1	0	0
+50	-1	0	0	+1	+2	+2	+1	0	0
+40	1	-1	-1	+1	+2	+1	+1	0	-1
+30	0	0	0	0	+1	+1	+1	0	0
+20	0	0	+1	0	0	0	0	+1	+1
+10	-1	-1	0	0	0	-1	-2	0	0
0	-1	-1	-1	0	0	-5	0	0	0
-10	0	0	0	0	0	0	+2	+3	+2
-20	0	0	0	+2	0	+2	+4	+3	+4
-30	-1	0	0	+1	0	+3	+3	+4	+4
-40	-1	-2	+2	-1	-1	+2	+2	+2	+3
-50	-1	0	0	0	-1	+1	+1	+2	+2
-60	+1	0	0	0	0	+1	-1	0	0
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	-1	-2	-2	-1	0	0	-1	0	0
+50	-2	-2	-2	-1	0	0	0	0	0
+40	-2	-1	-2	-1	0	0	0	0	0
+30	-1	-1	-1	0	0	0	0	0	0
+20	0	0	-1	0	0	0	0	0	0
+10	0	+1	0	0	-1	0	0	0	-1
0	+2	+1	0	-1	0	0	0	-1	-1
-10	+1	0	-1	-1	0	0	0	0	-1
-20	+2	0	0	0	0	0	0	0	0
-30	+3	0	-1	-1	0	0	0	0	0
-40	+2	+1	-2	-2	-1	-2	0	..	..
-50	+2	+2	0	-2	-3	..	..	..	..
-60	+1	+2	+1	-1	-2	..	..	..	..
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

[a] North latitudes positive, south latitudes negative

Table 5--Concluded

Preliminary values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1942.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	0	0	0	0	0	0	0	0	-1
+50	0	0	0	0	0	0	0	+1	0
+40	0	0	0	0	+1	0	0	0	-1
+30	0	+1	+1	+1	+1	0	+1	-1	0
+20	0	+1	+1	+1	0	0	-1	-1	+1
+10	0	0	0	0	0	0	0	0	+1
0	-1	0	0	0	0	0	0	0	0
-10	-1	-1	-1	0	0	0	0	0	0
-20	-1	-2	-2	-2	-2	-1	-1	-1	-1
-30	0	-1	-2	-2	-2	-2	-2	-2	-1
-40	..	0	0	0	-1	-1	-2	-2	-1
-50	..	0	0	0	0	0	-1	0	0
-60	..	..	-1	-1	-1	0	0	0	+1
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	..	..	..	..	..	..	..	..	..
+70	..	..	..	..	..	..	..	..	..
+60	0	+1	+1	0	-1	-2	-2	-1	0
+50	0	+1	+1	0	0	-1	-1	-1	-2
+40	+1	+2	0	-1	-1	-1	0	0	-1
+30	+3	+3	+1	-1	-2	-1	0	0	0
+20	+3	+3	0	-2	-2	-1	-1	-1	0
+10	+1	+1	0	0	-1	0	0	0	-1
0	+1	0	+2	0	0	0	0	0	0
-10	0	+2	+2	0	0	0	0	+1	0
-20	0	+2	+2	0	0	+1	+2	+1	+1
-30	0	0	+1	0	0	+1	0	0	0
-40	-1	0	+1	0	0	+1	0	0	0
-50	0	0	+1	+1	0	+1	0	0	0
-60	+1	+2	+2	+2	+1	+1	+1	0	0
-70	..	..	..	..	..	..	..	..	..
-80	..	..	..	..	..	..	..	..	..

[a] North latitudes positive, south latitudes negative

Table 6

Final values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]\operatorname{cosec}\theta$ for epoch 1912.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	0	-1	-2	0	-1	-1	-1	-2	-2
+70	0	0	-1	0	0	0	-1	-1	-1
+60	+1	0	0	-1	0	0	-1	-1	-1
+50	0	0	0	0	0	-1	-1	-1	-1
+40	0	0	0	0	0	-1	-1	+1	+1
+30	0	0	0	0	0	0	0	+1	0
+20	0	0	0	0	0	+1	0	0	0
+10	0	0	0	0	0	+1	0	+1	+1
0	0	0	0	0	0	+1	0	0	0
-10	0	0	0	0	-1	0	0	-1	0
-20	0	0	0	0	-1	0	0	0	0
-30	0	0	0	0	0	0	0	0	0
-40	0	0	0	-1	-1	-1	0	0	0
-50	-1	-1	0	0	0	+1	0	+1	+1
-60	0	-1	0	0	+1	+1	0	+1	0
-70	+1	0	+1	-1	0	+1	-1	0	-1
-80	+1	+1	-1	-3	0	-2	-2	-2	0

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-2	-1	-1	-1	0	+1	+1	+1	-1
+70	-2	-2	-1	-1	-1	0	0	0	0
+60	-2	-1	0	0	0	0	0	-1	+1
+50	0	0	+1	+1	+1	0	0	0	0
+40	0	0	0	0	0	0	0	0	0
+30	0	0	0	0	+1	+1	+1	0	0
+20	0	0	0	0	0	0	0	0	0
+10	0	0	0	0	0	0	0	0	0
0	+1	0	0	0	0	0	0	0	0
-10	0	0	0	0	0	0	0	0	0
-20	0	0	0	0	0	0	0	0	-1
-30	0	0	+1	+1	+1	0	0	0	0
-40	0	+1	+1	+1	+1	0	0	0	+1
-50	-1	0	0	0	0	0	0	0	0
-60	0	0	0	-1	-1	-1	-1	-1	0
-70	-2	-1	-1	-1	-1	-1	0	+1	+1
-80	0	0	-1	-3	-1	+2	+3	+3	0

[a] North latitudes positive, south latitudes negative

Table 6--Concluded

Final values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1912.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-1	-1	+1	+1	0	+1	+1	-1	+1
+70	0	+1	+1	+1	+2	+1	0	+1	0
+60	+1	0	+1	+1	+1	+1	0	0	+1
+50	+1	+1	+1	0	0	0	0	0	0
+40	0	0	0	0	0	0	+1	+1	0
+30	0	0	-1	0	0	0	0	0	-1
+20	-1	-1	-1	0	0	0	0	0	0
+10	-1	-1	-1	0	0	0	0	0	0
0	-1	-1	0	0	0	0	0	0	0
-10	0	0	0	0	0	0	0	0	0
-20	0	0	0	0	0	0	0	0	0
-30	0	0	0	0	0	0	0	0	0
-40	0	0	0	0	0	00	0	0	-1
-50	0	+1	+1	0	0	0	0	0	0
-60	+1	+2	+1	+1	0	0	0	0	0
-70	+3	+3	+3	+2	+1	+1	-1	-1	-1
-80	+1	-1	-1	-1	+1	-1	+2	+3	+3

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+1	+1	-1	+1	0	+1	+1	+2	+1
+70	0	0	+1	+1	0	-1	0	0	+1
+60	0	+1	0	-1	0	-1	-1	0	0
+50	0	0	0	+1	0	0	0	0	0
+40	0	0	-1	0	0	+1	+1	-1	-1
+30	-1	0	0	0	0	+1	0	+1	0
+20	0	-1	0	0	0	0	0	0	0
+10	0	0	0	0	0	0	-1	0	0
0	-1	0	0	0	0	0	0	0	0
-10	0	0	0	0	+1	0	+1	0	+1
-20	0	-1	0	0	0	0	0	0	0
-30	0	-1	0	0	0	0	0	0	+1
-40	-1	0	0	0	0	-1	-1	0	0
-50	0	0	0	-1	-1	-1	-1	0	0
-60	0	0	0	0	0	-1	0	0	0
-70	0	0	+1	+1	0	0	0	0	+1
-80	+1	-2	0	+1	+1	+1	+1	+1	-1

[a] North latitudes positive, south latitudes negative

Table 7

Final values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1922.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+1	+1	+1	0	-1	-2	-1	0	+1
+70	0	+1	0	0	0	0	0	-1	-2
+60	0	0	0	0	0	0	0	-1	-1
+50	0	0	0	0	0	+1	-1	-1	0
+40	0	0	0	0	0	0	0	0	0
+30	0	-1	0	0	0	0	0	0	0
+20	0	0	0	0	0	0	0	0	0
+10	0	0	0	+1	+1	0	0	0	0
0	0	0	0	0	+1	0	0	0	+1
-10	0	-1	-1	0	0	0	0	0	+1
-20	0	0	0	0	-1	0	0	+1	+1
-30	0	0	0	0	0	+1	+1	+1	+1
-40	-1	0	-1	-2	-1	0	+1	0	0
-50	0	-1	-1	-1	0	0	0	0	0
-60	-1	-1	-1	0	+1	+1	0	+1	-1
-70	-1	+1	0	+1	+2	+1	+1	+1	-1
-80	+1	+2	+2	+2	+2	0	-1	-1	-1

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-1	-1	-1	-2	-1	-2	-1	+1	+1
+70	-1	-1	-2	-1	0	-1	0	0	+1
+60	-1	0	0	0	0	0	+1	+1	+1
+50	0	0	0	0	0	0	+1	+1	0
+40	0	0	0	0	0	0	0	0	0
+30	0	0	0	0	0	0	0	0	0
+20	0	0	0	0	0	0	0	0	0
+10	+1	0	0	0	0	0	0	-1	0
0	+1	0	+1	0	0	0	0	0	0
-10	0	0	0	0	0	0	0	0	0
-20	+1	0	0	0	0	0	0	0	0
-30	+1	0	-1	-1	0	0	0	0	0
-40	0	0	0	0	0	+1	0	0	0
-50	0	0	0	0	+1	0	0	0	0
-60	-1	0	0	-1	-1	-1	-1	0	0
-70	-1	-2	-2	-1	-1	0	-1	0	0
-80	-1	-1	-2	-1	-1	-1	0	+1	+1

[a] North latitudes positive, south latitudes negative

Table 7--Concluded

Final values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]\ \mathrm{cosec}\ \theta$ for epoch 1922.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+1	+1	+2	+1	+1	+1	+1	-1	+1
+70	+1	+1	+1	+1	0	0	0	-1	0
+60	+1	+1	+1	0	0	0	0	0	0
+50	+1	0	0	0	0	0	0	0	-1
+40	0	0	0	0	0	0	0	0	0
+30	0	0	0	0	0	0	0	+1	0
+20	0	0	0	0	0	+1	+1	+2	+1
+10	0	0	0	0	0	0	+1	+1	+1
0	0	0	0	0	0	0	0	0	-1
-10	0	0	0	0	0	0	0	0	-1
-20	0	0	0	0	0	0	0	0	-1
-30	0	0	0	0	0	0	0	-1	-1
-40	-1	0	0	0	0	0	0	-1	-1
-50	0	0	0	0	0	0	-1	-1	0
-60	+1	+1	+1	+1	+1	0	-1	-1	-1
-70	0	+1	+1	+1	+2	+2	0	-1	-1
-80	-2	-2	-2	-1	-2	0	+1	+1	+1

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	0	-1	0	-1	-1	+1	+1	+1	+1
+70	0	0	0	0	0	+1	0	+1	0
+60	0	0	0	0	0	0	0	0	0
+50	0	0	0	+1	0	0	0	0	0
+40	0	+1	0	0	0	0	0	0	0
+30	0	0	0	-2	0	0	+1	0	0
+20	0	0	0	-1	0	+1	0	0	0
+10	+1	0	0	-1	0	0	0	0	-1
0	0	0	0	0	0	0	0	0	0
-10	-1	-1	0	0	0	0	+1	0	0
-20	-1	-1	0	+1	0	0	+1	+1	0
-30	-1	0	+1	+1	0	0	0	+1	0
-40	0	0	0	0	0	0	0	0	-1
-50	0	-1	-1	-1	0	0	0	+1	+1
-60	0	-1	0	+1	0	-1	0	0	-1
-70	-1	0	+1	+1	+1	+1	0	-2	-2
-80	-1	0	+1	+1	+1	+2	+1	+2	+3

[a] North latitudes positive, south latitudes negative

Table 8

Final values of $\dot{f}=[d\dot{x}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1932.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	0	0	0	0	-1	-1	-1	+1	+1
+70	-1	0	-1	-1	-1	-1	0	0	0
+60	0	0	-1	0	0	0	0	0	0
+50	0	0	0	+1	+1	0	+1	0	0
+40	0	0	0	0	0	0	0	0	0
+30	0	0	0	0	0	0	0	0	0
+20	0	0	0	0	0	0	0	0	0
+10	0	0	0	0	0	0	0	0	0
0	0	0	-1	0	0	0	0	0	+1
-10	0	0	0	0	0	0	+1	0	+1
-20	0	0	0	0	+1	0	0	+1	+1
-30	0	0	-1	+1	+1	0	0	0	0
-40	0	-1	-1	0	0	+1	+1	0	0
-50	-1	-1	0	0	0	+1	+1	+2	0
-60	0	-1	0	0	+1	0	0	0	0
-70	0	0	0	0	-1	-2	-2	-2	0
-80	+2	+2	+1	-2	-4	-5	-4	-1	-1

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	0	-1	-1	0	-1	-1	0	-1	+1
+70	0	0	0	0	0	0	0	+1	+1
+60	0	0	0	0	0	0	0	0	+1
+50	0	0	0	0	0	0	0	0	0
+40	-1	-1	-1	0	0	0	0	0	0
+30	0	0	-1	0	0	0	0	0	0
+20	0	0	0	0	+1	0	0	0	0
+10	0	0	0	0	0	0	0	0	0
0	0	0	-1	-1	0	0	0	0	0
-10	0	+1	+1	0	-1	0	0	0	0
-20	0	0	+1	0	0	0	0	0	0
-30	+1	+2	+2	0	0	0	0	-1	-1
-40	0	+1	+1	0	0	0	-1	-1	-1
-50	0	+1	+1	-1	-2	-2	-1	-1	0
-60	0	0	0	-1	+1	0	0	+1	0
-70	0	0	0	0	0	0	+1	0	-1
-80	-1	+1	+2	+1	+1	+1	+2	+1	-1

[a] North latitudes positive, south latitudes negative

Table 8--Concluded

Final values of $\dot{f}=[d\dot{x}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1942.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+1	+1	+1	0	+1	0	+1	+1	+1
+70	+1	0	+1	+1	+1	+1	+1	-1	-1
+60	+1	+1	+1	+1	0	0	-1	-1	-1
+50	0	0	0	0	0	0	0	0	0
+40	0	0	0	0	0	0	0	0	0
+30	0	0	0	0	0	0	0	0	0
+20	0	0	0	0	0	0	-1	-1	0
+10	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
-10	0	0	0	0	0	0	0	0	0
-20	-1	-1	0	0	0	0	0	0	0
-30	-1	-1	0	0	0	0	0	0	0
-40	0	0	0	-1	-1	-1	0	0	0
-50	0	0	0	0	0	-1	0	0	0
-60	0	0	0	0	-1	0	0	0	0
-70	+1	0	-1	0	+1	+1	+1	0	+1
-80	-1	-3	-2	-2	-1	+1	+1	+1	+2

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+1	0	-1	0	0	+1	0	-1	-1
+70	-1	-1	0	-1	-1	0	0	0	-1
+60	-1	0	0	+1	0	0	0	0	-1
+50	0	0	0	+1	+1	+1	0	0	0
+40	0	0	0	+1	+1	+1	+1	0	0
+30	+1	0	0	-1	0	+1	+1	+1	0
+20	0	0	0	-1	0	0	+1	0	0
+10	-1	0	0	-1	-1	0	0	0	0
0	0	0	0	0	0	-1	0	0	0
-10	+1	+1	0	0	0	0	0	0	0
-20	+1	0	0	-1	0	0	0	0	0
-30	0	0	0	0	+1	0	0	0	0
-40	0	0	0	0	0	0	0	0	0
-50	0	0	+1	0	0	0	0	0	0
-60	+1	+1	+1	+1	+1	0	+1	0	-1
-70	0	+1	+1	+1	+1	+1	0	0	-1
-80	+1	+1	0	-2	-2	-1	-1	+2	+1

[a] North latitudes positive, south latitudes negative

Table 9

Final values of $\dot{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1942.5 expressed in gammas per year per degrees of arc, for 10-degree intervals of geograpnic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+1	0	+1	0	-1	0	0	0	+1
+70	+1	0	0	-1	-1	0	+1	+1	+1
+60	-1	0	0	0	0	+1	0	0	-1
+50	0	0	0	0	0	0	0	0	0
+40	0	0	0	0	0	0	0	0	0
+30	0	0	0	0	0	0	0	0	0
+20	0	0	0	0	0	0	0	0	0
+10	-1	-1	0	0	+1	0	0	0	0
0	0	0	0	0	0	0	0	0	0
-10	0	0	0	0	0	-1	0	0	0
-20	0	0	0	0	0	0	+1	0	0
-30	0	0	0	0	0	+1	0	0	0
-40	0	0	0	0	0	0	0	0	0
-50	0	0	0	0	0	0	0	0	0
-60	0	0	0	0	0	0	+1	0	+1
-70	0	0	0	0	0	0	+1	+1	+2
-80	-1	-1	+1	-1	-1	+1	+2	+2	+1

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+1	0	0	-1	-1	-1	-2	-1	-1
+70	0	0	-1	-1	-1	-1	-1	0	-1
+60	-1	-1	0	0	0	0	0	0	0
+50	0	-1	-1	0	-1	-1	0	0	0
+40	0	0	0	0	0	0	0	0	0
+30	0	-1	-1	0	-1	0	0	0	0
+20	0	0	0	0	0	0	0	0	0
+10	0	0	0	0	0	0	0	0	0
0	0	0	0	-1	0	0	0	0	0
-10	0	0	0	0	0	0	0	0	0
-20	+1	0	0	0	0	0	0	0	0
-30	+1	+1	0	0	0	0	0	0	0
-40	0	0	0	0	0	0	0	0	0
-50	0	0	0	0	0	0	0	0	0
-60	0	0	0	0	0	0	0	0	+1
-70	+2	+2	+2	+2	+1	+1	+1	+1	0
-80	0	0	+1	0	+1	+1	+1	+2	+1

[a] North latitudes positive, south latitudes negative

Table 9--Concluded

Final values of $\mathring{f}=[d\dot{X}/d\lambda+d(\dot{Y}\sin\theta)/d\theta]$ cosec θ for epoch 1942.5 expressed in gammas per year per degree of arc, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-1	0	0	0	0	0	-1	0	+1
+70	0	0	+1	+1	0	+1	+1	+1	0
+60	0	0	0	0	0	0	0	0	-1
+50	0	0	0	0	0	0	0	0	0
+40	0	0	0	0	0	0	0	0	0
+30	0	0	+1	+1	+1	0	0	0	0
+20	0	0	0	+1	+1	+1	0	0	0
+10	0	0	0	0	0	0	+1	0	0
0	0	0	0	0	0	0	+1	0	0
-10	0	0	0	0	0	0	0	0	0
-20	0	0	0	0	0	0	0	0	0
-30	0	0	0	0	-1	-1	0	0	0
-40	0	0	0	0	0	0	0	0	0
-50	0	0	0	0	0	0	-1	-1	-1
-60	0	-1	-1	-1	-1	0	0	-1	-1
-70	0	-1	0	0	0	-1	0	0	0
-80	0	+1	+1	+1	0	+1	+1	+1	+1

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+1	+1	-1	-2	-1	-1	+1	0	+1
+70	0	-1	-1	-1	-1	0	-1	0	0
+60	-1	0	0	0	0	0	0	0	-1
+50	0	0	0	0	0	-1	0	-1	-1
+40	0	+1	0	-1	-1	0	0	0	0
+30	0	0	0	0	0	0	0	0	0
+20	0	+1	0	-1	-1	-1	-1	-1	0
+10	0	+1	0	0	-1	-1	0	0	0
0	0	0	-1	0	0	0	0	0	0
-10	0	0	0	+1	0	0	0	0	0
-20	0	0	0	+1	+1	+1	0	0	0
-30	0	0	0	0	0	+1	0	0	0
-40	0	0	0	0	0	0	0	0	0
-50	0	0	0	0	0	0	0	0	0
-60	0	0	0	0	0	+1	0	0	+1
-70	0	-1	-1	-2	0	0	0	0	0
-80	0	0	0	+1	0	0	+2	+1	0

[a] North latitudes positive, south latitudes negative

Table 10

Values of line-integrals for
east component ($a\int\dot{Y}\sin\theta d\lambda$) and north component ($a\int\dot{X}d\theta$)
of secular change for 1912.5, 1922.5, 1932.5, and 1942.5, expressed
in gauss-kilometers, for various
geographic parallels and meridians

east component ($a\int\dot{Y}\sin\theta d\lambda$)

ϕ	Epoch			
	1912.5	1922.5	1932.5	1942.5
+80	0	- 1	0	- 6
+70	- 8	- 7	+ 7	- 9
+60	0	+ 8	- 17	- 10
+50	- 4	+ 15	- 4	- 12
+40	+ 8	+ 15	+ 36	+ 1
+30	+ 8	- 16	+ 25	- 14
+20	+ 9	- 29	+ 60	- 8
+10	+ 7	+ 30	- 4	- 23
0	+ 8	+ 83	+ 25	- 38
-10	+ 4	+ 87	- 35	+ 4
-20	- 7	+ 98	- 3	+ 23
-30	- 1	+ 83	+ 43	- 29
-40	+ 1	+ 75	- 32	+ 28
-50	- 14	+ 10	- 6	- 32
-60	- 2	+ 14	+ 8	- 6
-70	+ 4	- 2	+ 3	+ 12
-80	+ 4	0	+ 2	- 16

north component ($a\int\dot{X}d\theta$)

λE	Epoch			
	1912.5	1922.5	1932.5	1942.5
0 and 180	+ 54	+ 75	+ 33	+ 47
30 and 210	+ 35	- 17	- 40	- 28
60 and 240	- 35	- 34	+ 13	+ 3
90 and 270	- 22	+ 14	+ 53	+ 54
120 and 300	- 52	+ 37	+ 17	- 29
150 and 330	+ 28	- 25	- 21	- 72

Table 11

Coordinates of north and south magnetic poles

Date or Epoch	Based on secular-change charts for four epochs and positions observed in 1904.5 for north pole and 1912.5 for south pole				Based on isomagnetic charts for four epochs and positions observed in 1904.5 and 1945	
	North latitude	East longitude	South latitude	East longitude	North latitude	East longitude
	°	°	°	°	°	°
1904.5	70.5[a]	263.5[a]	..	..	70.5[a]	263.5[a]
1912.5	70.9	263.2	71.2[b]	150.5[b]	71.3	262.7
1922.5	71.4	262.8	70.2	149.2	72.6	261.8
1932.5	71.9	262.4	69.0	148.1	74.0	260.0
1942.5	72.6	262.1	68.3	146.2	75.4	258.2
1945.0	72.8	262.0	68.2	145.4	76.0[c]	258.0[c]

[a] After Wasserfall (1939) based on observations by Amundsen
[b] After Farr (1944) based on observations by Mawson
[c] Preliminary values communicated verbally as observed on *Aries*

Table 12

Geomagnetic secular change in vertical intensity for epoch 1912.5 expressed in gammas per year, computed from spherical harmonic coefficients of north and east intensity of secular change

Latitude	Longitude											
	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°	360°
+80	- 41	- 42	- 41	- 40	- 40	- 42	- 45	- 48	- 50	- 48	- 43	- 40
+70	- 29	- 33	- 32	- 31	- 35	- 44	- 51	- 58	- 67	- 64	- 45	- 30
+60	- 6	- 5	- 9	- 18	- 30	- 51	- 58	- 66	- 89	- 89	- 53	- 16
+50	+ 22	+ 40	+ 23	- 9	- 28	- 58	- 61	- 62	- 95	-107	- 73	- 11
+40	+ 41	+ 88	+ 51	- 9	- 27	- 58	- 54	- 45	- 68	- 93	- 99	- 24
+30	+ 40	+117	+ 58	- 17	- 26	- 52	- 41	- 22	- 9	- 40	-120	- 54
+20	+ 19	+120	+ 41	- 27	- 26	- 47	- 28	- 6	+ 60	+ 35	-129	- 89
+10	- 7	+104	+ 5	- 33	- 29	- 49	- 18	- 2	+106	+ 91	-128	-117
0	- 22	+ 89	- 32	- 34	- 30	- 56	- 11	- 5	+109	+ 97	-125	-131
-10	- 13	+ 93	- 48	- 28	- 25	- 57	+ 2	- 3	+ 76	+ 55	-125	-130
-20	+ 16	+119	- 33	- 14	- 9	- 43	+ 22	+ 15	+ 40	+ 1	-121	-115
-30	+ 54	+150	+ 6	+ 5	+ 9	- 19	+ 45	+ 48	+ 33	- 22	- 97	- 83
-40	+ 88	+166	+ 46	+ 19	+ 19	+ 2	+ 61	+ 85	+ 62	+ 7	- 45	- 35
-50	+105	+153	+ 66	+ 21	+ 12	+ 9	+ 64	+111	+108	+ 69	+ 25	+ 23
-60	+103	+116	+ 57	+ 10	- 5	+ 3	+ 55	+114	+137	+120	+ 85	+ 71
-70	+ 87	+ 73	+ 35	- 1	- 15	- 1	+ 42	+ 94	+127	+129	+110	+ 91
-80	+ 63	+ 45	+ 24	+ 7	+ 2	+ 12	+ 36	+ 65	+ 87	+ 95	+ 90	+ 78

Table 13

Geomagnetic secular change in vertical intensity for epoch 1922.5 expressed in gammas per year, computed from spherical harmonic coefficients of north and east intensity of secular change

Latitude	Longitude											
	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°	360°
+80	- 36	- 35	- 38	- 43	- 49	- 57	- 62	- 65	- 64	- 59	- 49	- 40
+70	- 17	- 18	- 22	- 30	- 43	- 57	- 66	- 73	- 79	- 72	- 49	- 26
+60	+ 5	+ 6	- 3	- 16	- 33	- 56	- 63	- 72	- 93	- 92	- 58	- 14
+50	+ 26	+ 39	+ 21	- 4	- 23	- 53	- 54	- 62	- 97	-108	- 77	- 14
+40	+ 40	+ 73	+ 44	+ 2	- 15	- 47	- 42	- 48	- 83	-103	-102	- 26
+30	+ 41	+ 96	+ 53	0	- 11	- 40	- 31	- 32	- 46	- 71	-122	- 49
+20	+ 25	+ 93	+ 41	- 6	- 14	- 35	- 21	- 16	+ 5	- 20	-129	- 75
+10	+ 2	+ 67	+ 6	- 15	- 21	- 33	- 13	- 1	+ 51	+ 25	-126	- 98
0	- 13	+ 38	- 37	- 24	- 28	- 34	- 5	+ 14	+ 74	+ 38	-121	-112
-10	- 5	+ 31	- 62	- 25	- 27	- 32	+ 3	+ 26	+ 70	+ 17	-120	-113
-20	+ 29	+ 58	- 54	- 16	- 14	- 22	+ 14	+ 40	+ 55	- 12	-114	- 96
-30	+ 77	+105	- 16	0	+ 5	- 6	+ 28	+ 60	+ 56	- 18	- 91	- 61
-40	+119	+143	+ 30	+ 14	+ 16	+ 10	+ 45	+ 88	+ 84	+ 18	- 39	- 9
-50	+136	+149	+ 55	+ 17	+ 13	+ 19	+ 62	+118	+128	+ 80	+ 31	+ 48
-60	+127	+120	+ 52	+ 9	+ 4	+ 22	+ 73	+135	+161	+135	+ 95	+ 91
-70	+102	+ 81	+ 38	+ 6	+ 3	+ 27	+ 75	+128	+158	+151	+125	+107
-80	+ 79	+ 59	+ 38	+ 24	+ 25	+ 42	+ 70	+100	+119	+121	+111	+ 96

Table 14

Geomagnetic secular change in vertical intensity for epoch 1932.5 expressed in gammas per year, computed from spherical harmonic coefficients of north and east intensity of secular change

Latitude	Longitude											
	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°	360°
+80	-19	-12	-12	-18	-27	-37	-46	-54	-57	-55	-45	-31
+70	+8	+18	+13	0	-18	-36	-49	-62	-73	-70	-48	-17
+60	+37	+49	+34	+12	-10	-34	-49	-65	-85	-83	-51	-2
+50	+57	+74	+46	+20	-1	-31	-45	-65	-89	-89	-58	+5
+40	+60	+88	+47	+20	+5	-28	-40	-61	-77	-84	-76	-6
+30	+44	+84	+35	+14	+2	-27	-34	-51	-44	-62	-100	-34
+20	+15	+62	+7	+3	-11	-33	-29	-35	+5	-28	-121	-67
+10	-10	+29	-34	-11	-28	-44	-24	-15	+49	+1	-129	-90
0	-16	-2	-74	-21	-37	-51	-18	+3	+70	+12	-123	-92
-10	+5	-3	-96	-20	-27	-45	-8	+17	+63	0	-107	-74
-20	+45	+22	-87	-9	-2	-25	+10	+33	+44	-19	-87	-45
-30	+90	+66	-51	+5	+21	0	+34	+58	+42	-20	-58	-10
-40	+123	+103	-8	+9	+23	+16	+58	+94	+72	+13	-17	+28
-50	+132	+114	+18	-3	+4	+17	+76	+130	+121	+71	+39	+65
-60	+120	+95	+20	-20	-20	+11	+81	+147	+160	+127	+92	+94
-70	+96	+64	+13	-22	-22	+13	+76	+135	+160	+148	+121	+105
-80	+74	+49	+24	+7	+10	+32	+67	+100	+120	+121	+110	+93

Table 15

Geomagnetic secular change in vertical intensity for epoch 1942.5 expressed in gammas per year, computed from spherical harmonic coefficients of north and east intensity of secular change

Latitude	Longitude											
	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°	360°
+80	+21	+26	+25	+19	+9	-1	-8	-11	-11	-6	+2	+12
+70	+42	+52	+49	+37	+18	-1	-12	-17	-16	-9	+3	+22
+60	+60	+74	+63	+45	+21	-4	-13	-20	-23	-16	-2	+28
+50	+71	+88	+62	+38	+15	-11	-14	-26	-33	-30	-22	+21
+40	+68	+92	+48	+21	+5	-22	-16	-36	-42	-45	-52	+3
+30	+52	+82	+25	+4	-4	-31	-17	-41	-38	-51	-81	-23
+20	+24	+55	-5	-8	-10	-35	-14	-35	-15	-45	-99	-47
+10	-5	+15	-43	-17	-13	-35	-9	-19	+16	-34	-103	-64
0	-21	-24	-84	-25	-17	-32	-2	+1	+37	-32	-97	-67
-10	-10	-42	-114	-34	-21	-27	+7	+18	+39	-42	-88	-55
-20	+28	-27	-117	-40	-21	-19	+19	+35	+34	-50	-74	-28
-30	+76	+12	-92	-40	-19	-6	+38	+61	+42	-38	-49	+9
-40	+112	+51	-55	-38	-18	+9	+64	+99	+75	+4	-8	+47
-50	+116	+64	-28	-40	-21	+20	+88	+135	+121	+63	+40	+73
-60	+89	+45	-23	-45	-26	+24	+96	+150	+150	+108	+76	+79
-70	+50	+15	-27	-43	-25	+21	+82	+128	+138	+115	+85	+67
-80	+24	+2	-16	-20	-8	+19	+52	+78	+88	+81	+64	+45

Table 16

Values of secular change in declination (D) for epoch 1912.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 8.4	+ 7.8	+ 7.2	+ 6.6	+ 5.9	+ 5.2	+ 4.6	+ 3.9	+ 3.2
+70	+ 9.3	+ 8.3	+ 7.5	+ 6.7	+ 5.8	+ 4.9	+ 3.9	+ 2.7	+ 1.5
+60	+ 9.8	+ 8.4	+ 7.6	+ 6.6	+ 5.5	+ 4.1	+ 2.4	+ 0.5	- 2.1
+50	+ 9.6	+ 9.4	+ 8.1	+ 6.8	+ 5.6	+ 3.6	+ 1.3	- 1.4	- 4.3
+40	+ 8.6	+ 9.3	+ 9.0	+ 7.7	+ 5.8	+ 3.0	+ 0.7	- 1.9	- 5.0
+30	+ 7.7	+ 8.7	+ 9.1	+ 8.1	+ 6.1	+ 2.9	+ 0.3	- 1.9	- 4.1
+20	+ 7.2	+ 8.2	+ 8.5	+ 8.2	+ 6.7	+ 3.7	0.0	- 2.4	- 4.6
+10	+ 6.5	+ 7.6	+ 8.1	+ 8.7	+ 8.0	+ 5.0	- 0.3	- 3.2	- 5.3
0	+ 5.4	+ 7.3	+ 8.2	+ 9.9	+10.2	+ 6.9	- 1.1	- 4.6	- 6.0
-10	+ 4.6	+ 7.5	+ 9.4	+12.1	+12.0	+ 7.2	- 2.5	- 7.4	- 7.9
-20	+ 3.1	+ 7.4	+10.1	+13.0	+12.2	+ 6.3	- 6.0	-11.1	-11.6
-30	+ 1.7	+ 6.1	+10.2	+12.8	+11.0	+ 4.1	- 6.9	-14.7	-16.2
-40	+ 0.3	+ 3.8	+ 8.5	+ 9.6	+ 9.1	+ 2.6	- 5.0	-13.8	-17.4
-50	- 1.2	+ 2.1	+ 5.8	+ 7.3	+ 6.9	+ 3.8	- 1.5	- 8.0	-10.8
-60	- 1.4	+ 0.9	+ 3.6	+ 5.3	+ 5.6	+ 5.7	+ 4.7	+ 1.9	- 0.9
-70	- 1.2	+ 0.2	+ 1.9	+ 3.7	+ 4.8	+ 5.4	+ 6.5	+ 9.0	+10.5
-80	- 8.6	- 8.3	- 8.1	- 8.0	- 8.1	- 8.5	- 9.1	- 9.7	-10.1

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+ 2.6	+ 1.8	+ 0.9	- 0.1	- 1.5	- 2.9	- 4.2	- 5.2	- 6.4
+70	+ 0.2	- 1.2	- 2.9	- 4.4	- 6.0	- 8.0	- 8.8	- 8.6	- 8.1
+60	- 4.4	- 6.2	- 7.2	- 7.2	- 6.6	- 6.0	- 5.6	- 5.2	- 4.6
+50	- 6.7	- 6.9	- 5.7	- 4.7	- 4.3	- 4.0	- 3.7	- 3.2	- 2.3
+40	- 7.1	- 5.4	- 4.0	- 3.2	- 2.8	- 2.7	- 2.5	- 1.9	- 1.1
+30	- 6.6	- 4.7	- 3.3	- 2.3	- 1.5	- 1.5	- 1.4	- 0.9	- 0.2
+20	- 6.2	- 4.4	- 2.6	- 1.4	- 0.5	- 0.5	- 0.5	- 0.4	+ 0.3
+10	- 5.3	- 3.3	- 1.7	- 0.5	+ 0.3	- 0.6	- 1.2	- 0.5	+ 0.4
0	- 4.2	- 2.1	- 0.7	+ 0.2	+ 1.1	- 0.5	- 1.5	- 0.6	+ 0.4
-10	- 4.5	- 1.7	- 0.1	+ 1.0	+ 1.0	- 0.6	- 1.4	- 0.4	+ 0.6
-20	- 6.8	- 2.4	+ 0.2	+ 1.4	+ 0.5	- 1.0	- 1.1	- 0.0	+ 1.0
-30	-11.0	- 5.3	- 1.0	+ 1.2	- 0.2	- 1.2	- 0.7	+ 0.4	+ 1.4
-40	-13.9	- 9.5	- 4.1	- 0.7	- 1.5	- 1.1	0.0	+ 1.0	+ 1.7
-50	-11.3	-11.0	- 8.9	- 5.8	- 3.4	- 0.7	+ 0.9	+ 3.0	+ 3.5
-60	- 2.0	- 1.7	- 2.3	- 3.5	- 4.7	0.0	+ 5.9	+ 9.4	+11.4
-70	+10.0	+ 6.4	- 1.2	- 7.8	-22.0	-50.0	+40.0	+110.0	+60.0
-80	-12.0	-14.0	-18.0	-22.0	-27.0	-27.0	-21.0	- 15.0	- 9.5

[a] North latitudes positive, south latitudes negative

Table 16--Concluded

Values of secular change in declination (D) for epoch 1912.5
in minutes per year, at 10-degree intervals of
geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 7.4	- 8.4	- 9.2	- 9.4	- 9.6	- 9.8	- 9.7	- 7.5	0.0
+70	- 7.1	- 5.7	- 4.4	- 3.3	- 3.4	- 5.2	- 8.0	-17.0	-54.0
+60	- 3.6	- 2.3	- 1.0	- 0.2	+ 0.2	- 0.5	- 3.4	- 7.2	-13.0
+50	- 1.4	- 0.3	+ 0.7	+ 1.3	+ 1.7	+ 1.6	+ 0.6	- 0.7	- 2.6
+40	- 0.2	+ 0.6	+ 1.4	+ 2.1	+ 2.6	+ 2.8	+ 2.6	+ 2.0	+ 1.0
+30	+ 0.5	+ 1.2	+ 1.8	+ 2.4	+ 2.9	+ 3.3	+ 3.4	+ 3.3	+ 2.8
+20	+ 0.8	+ 1.3	+ 1.8	+ 2.4	+ 3.1	+ 3.5	+ 3.9	+ 4.1	+ 3.9
+10	+ 1.1	+ 1.4	+ 1.7	+ 2.0	+ 2.6	+ 3.2	+ 3.8	+ 4.4	+ 4.9
0	+ 1.2	+ 1.6	+ 1.7	+ 1.7	+ 1.8	+ 2.2	+ 3.0	+ 3.8	+ 4.4
-10	+ 1.4	+ 2.1	+ 2.4	+ 2.5	+ 2.3	+ 1.9	+ 1.9	+ 2.6	+ 3.0
-20	+ 2.0	+ 2.8	+ 3.2	+ 3.3	+ 3.1	+ 2.7	+ 2.0	+ 1.6	+ 1.4
-30	+ 2.5	+ 3.6	+ 4.1	+ 4.2	+ 3.8	+ 2.9	+ 1.9	+ 1.0	+ 0.2
-40	+ 2.8	+ 4.3	+ 5.3	+ 5.1	+ 4.0	+ 2.8	+ 1.8	+ 0.8	- 0.1
-50	+ 5.7	+ 6.5	+ 6.9	+ 6.4	+ 5.6	+ 3.9	+ 2.6	+ 1.3	+ 0.1
-60	+11.7	+11.5	+10.8	+ 9.2	+ 7.3	+ 5.2	+ 3.5	+ 2.1	+ 0.9
-70	+29.5	+20.0	+15.0	+10.5	+ 7.6	+ 5.4	+ 3.9	+ 2.3	+ 0.9
-80	- 3.1	- 1.0	- 0.1	0.0	- 0.6	- 1.7	- 2.7	- 3.6	- 4.2

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 5.5	+ 9.3	+11.0	+11.4	+11.3	+11.0	+10.4	+ 9.8	+ 9.2
+70	+50.0	+25.0	+18.5	+16.3	+14.5	+13.6	+12.6	+11.4	+10.3
+60	-13.1	+ 1.3	+ 8.5	+11.2	+11.8	+11.8	+11.0	+10.1	+10.4
+50	- 4.8	- 5.5	- 4.1	0.0	+ 4.4	+ 6.6	+ 7.6	+ 8.5	+ 9.3
+40	- 0.3	- 3.7	- 7.3	- 7.1	- 2.7	+ 0.8	+ 3.6	+ 6.1	+ 7.4
+30	+ 2.0	- 1.1	- 7.2	-10.7	- 9.0	- 5.2	- 1.2	+ 3.2	+ 6.3
+20	+ 3.3	+ 1.0	- 5.6	-11.8	-11.5	- 9.2	- 5.3	+ 0.3	+ 5.0
+10	+ 5.1	+ 2.2	- 4.5	-11.7	-13.5	-11.3	- 8.0	- 2.4	+ 3.0
0	+ 4.4	+ 1.6	- 5.5	-11.7	-14.4	-12.0	- 8.2	- 3.7	+ 1.4
-10	+ 2.5	+ 0.3	- 5.5	-11.3	-13.5	-10.3	- 7.1	- 4.3	+ 0.3
-20	+ 0.6	- 1.3	- 6.2	-10.3	-11.0	- 8.8	- 6.6	- 4.6	- 0.9
-30	- 0.7	- 2.6	- 6.4	- 9.2	-10.1	- 8.1	- 6.6	- 4.9	- 2.1
-40	- 1.2	- 2.7	- 5.2	- 7.2	- 8.3	- 7.6	- 6.4	- 5.1	- 3.1
-50	- 1.0	- 2.3	- 3.7	- 5.2	- 5.9	- 6.3	- 5.8	- 4.8	- 3.5
-60	- 0.1	- 0.9	- 2.2	- 3.6	- 4.3	- 4.5	- 4.5	- 3.8	- 3.0
-70	- 0.2	- 1.1	- 1.8	- 2.4	- 2.6	- 2.8	- 2.8	- 2.6	- 2.1
-80	- 4.6	- 5.0	- 5.4	- 6.0	- 6.6	- 7.2	- 8.0	- 8.5	- 8.8

[a] North latitudes positive, south latitudes negative

Table 17

Values of secular change in declination (D) for epoch 1922.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+10.1	+ 9.3	+ 8.7	+ 8.0	+ 7.2	+ 6.3	+ 5.2	+ 3.6	+ 1.4
+70	+11.2	+10.3	+ 9.2	+ 8.2	+ 6.9	+ 5.6	+ 3.8	+ 2.0	- 0.3
+60	+12.5	+11.0	+ 9.7	+ 8.2	+ 6.4	+ 4.2	+ 2.0	- 0.7	- 2.3
+50	+11.2	+11.4	+ 9.9	+ 8.1	+ 6.0	+ 3.4	+ 0.4	- 1.7	- 3.4
+40	+ 9.4	+ 9.6	+ 9.4	+ 8.0	+ 5.7	+ 2.6	- 0.2	- 2.2	- 4.1
+30	+ 7.8	+ 8.2	+ 8.7	+ 7.5	+ 4.8	+ 2.2	- 0.4	- 2.5	- 4.2
+20	+ 6.7	+ 7.2	+ 7.7	+ 6.9	+ 4.4	+ 2.2	- 0.4	- 2.6	- 4.4
+10	+ 5.7	+ 7.2	+ 8.1	+ 7.6	+ 4.9	+ 2.0	- 1.1	- 3.0	- 3.8
0	+ 5.2	+ 7.2	+ 8.6	+ 9.1	+ 6.0	+ 1.3	- 2.7	- 4.1	- 3.6
-10	+ 3.8	+ 6.7	+ 8.8	+10.5	+ 7.4	- 0.3	- 5.4	- 6.8	- 4.8
-20	+ 2.0	+ 5.6	+ 9.1	+11.5	+ 7.6	- 3.6	- 9.0	-10.7	- 7.1
-30	+ 0.8	+ 4.2	+ 9.0	+10.9	+ 5.3	- 6.4	-13.5	-15.5	-11.0
-40	0.0	+ 2.9	+ 7.2	+ 8.6	+ 3.0	- 8.5	-14.4	-17.7	-13.8
-50	- 0.4	+ 1.8	+ 4.6	+ 5.6	+ 2.8	- 4.5	- 9.9	-13.4	-11.7
-60	- 0.4	+ 0.7	+ 2.5	+ 3.4	+ 2.8	+ 0.7	- 2.7	- 5.6	- 6.3
-70	- 6.0	- 5.0	- 3.6	- 2.2	- 0.4	+ 1.3	+ 2.8	+ 3.2	+ 2.0
-80	-10.5	-10.3	- 9.6	- 8.4	- 7.4	- 6.8	- 6.7	- 6.8	- 7.3

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 1.5	- 4.8	- 8.3	-12.0	-15.5	- 18.0	-19.2	- 19.3	-17.5
+70	- 2.5	- 5.3	- 8.6	-12.8	-14.6	- 12.8	-10.6	- 8.4	- 6.8
+60	- 3.7	- 5.0	- 7.5	- 8.4	- 7.2	- 6.8	- 5.3	- 4.2	- 3.6
+50	- 4.8	- 5.7	- 5.7	- 4.8	- 4.3	- 3.4	- 2.7	- 1.9	- 1.3
+40	- 5.1	- 5.0	- 3.7	- 2.8	- 3.1	- 2.5	- 1.7	- 0.9	- 0.4
+30	- 4.6	- 4.1	- 2.7	- 1.9	- 2.2	- 2.2	- 1.3	- 0.6	+ 0.1
+20	- 4.2	- 3.2	- 2.0	- 1.3	- 1.6	- 1.7	- 1.1	- 0.3	+ 0.3
+10	- 3.2	- 1.9	- 1.1	- 0.6	- 1.2	- 1.5	- 0.9	- 0.2	+ 0.4
0	- 1.8	- 0.6	+ 0.2	+ 0.2	- 0.7	- 1.2	- 0.8	- 0.2	+ 0.7
-10	- 2.1	+ 0.2	+ 1.4	+ 0.8	+ 0.1	- 0.8	- 0.7	0.0	+ 0.8
-20	- 3.2	- 0.2	+ 2.2	+ 1.9	+ 1.0	+ 0.1	- 0.2	+ 0.5	+ 1.2
-30	- 6.4	- 2.8	0.0	+ 1.2	+ 0.9	0.0	0.0	+ 1.2	+ 2.0
-40	-10.1	- 7.0	- 3.8	- 1.8	- 0.8	- 0.2	- 0.2	+ 1.4	+ 3.1
-50	-10.1	- 9.0	- 8.2	- 5.9	- 3.5	+ 0.2	+ 2.7	+ 3.9	+ 6.0
-60	- 6.1	- 6.4	- 6.4	- 8.4	- 7.4	+ 1.0	+ 8.2	+ 12.0	+13.7
-70	- 1.0	- 4.8	- 9.1	-14.7	-22.2	-100.0	+75.0	+130.0	+62.5
-80	- 8.3	-10.0	-12.9	-16.2	-22.0	- 31.0	-34.0	- 27.5	-18.5

[a] North latitudes positive, south latitudes negative

Table 17--Concluded

Values of secular change in declination (D) for epoch 1922.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-16.0	-15.5	-15.5	-17.0	-19.5	-24.0	-29.0	-25.0	- 6.0
+70	- 5.6	- 4.5	- 4.0	- 4.1	- 4.7	- 6.0	- 9.1	-19.0	-53.0
+60	- 2.7	- 1.9	- 1.4	- 0.8	- 0.7	- 1.1	- 3.7	- 8.3	-11.2
+50	- 0.7	- 0.3	+ 0.2	+ 0.6	+ 0.6	+ 0.1	- 1.4	- 3.6	- 4.9
+40	+ 0.1	+ 0.5	+ 0.9	+ 1.2	+ 1.2	+ 0.7	- 0.4	- 1.7	- 2.0
+30	+ 0.6	+ 1.1	+ 1.4	+ 1.7	+ 1.7	+ 1.3	+ 0.7	+ 0.1	+ 0.2
+20	+ 0.9	+ 1.4	+ 1.8	+ 2.1	+ 2.1	+ 1.8	+ 1.6	+ 1.5	+ 1.8
+10	+ 1.1	+ 1.6	+ 2.1	+ 2.3	+ 2.4	+ 2.4	+ 2.5	+ 2.8	+ 3.3
0	+ 1.2	+ 1.7	+ 2.2	+ 2.6	+ 2.7	+ 2.7	+ 2.8	+ 3.3	+ 4.1
-10	+ 1.8	+ 2.8	+ 3.2	+ 3.2	+ 3.1	+ 3.0	+ 2.8	+ 2.8	+ 3.2
-20	+ 2.3	+ 3.4	+ 3.8	+ 3.8	+ 3.7	+ 3.6	+ 3.3	+ 3.2	+ 2.3
-30	+ 3.2	+ 4.4	+ 4.8	+ 4.8	+ 4.4	+ 4.2	+ 3.9	+ 3.1	+ 1.8
-40	+ 4.5	+ 5.5	+ 6.1	+ 5.8	+ 5.4	+ 4.9	+ 4.4	+ 3.7	+ 2.4
-50	+ 7.0	+ 8.3	+ 8.6	+ 7.6	+ 6.7	+ 5.7	+ 5.0	+ 4.2	+ 2.8
-60	+14.0	+13.5	+12.3	+10.4	+ 8.7	+ 7.0	+ 5.7	+ 4.7	+ 3.2
-70	+30.0	+19.0	+14.7	+11.3	+ 8.4	+ 6.1	+ 4.4	+ 3.2	+ 1.9
-80	-10.0	- 5.5	- 2.4	- 1.1	- 0.8	- 0.8	- 1.1	- 1.4	- 1.9

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+11.5	+16.4	+16.7	+16.0	+14.8	+13.7	+12.7	+11.8	+10.9
+70	+35.0	+24.0	+18.6	+17.0	+15.7	+14.9	+14.3	+13.3	+12.2
+60	-10.6	+ 2.0	+ 6.0	+ 9.5	+ 9.9	+11.0	+11.3	+11.9	+12.3
+50	- 6.0	- 6.1	- 2.2	+ 2.2	+ 4.7	+ 6.3	+ 7.6	+ 8.7	+ 9.8
+40	- 1.9	- 3.9	- 5.7	- 3.5	- 1.0	+ 2.3	+ 4.3	+ 6.2	+ 8.3
+30	+ 0.4	- 0.8	- 5.3	- 9.1	- 7.1	- 3.3	+ 1.2	+ 4.4	+ 6.8
+20	+ 2.2	+ 0.5	- 4.8	-10.5	- 9.7	- 6.4	- 1.8	+ 2.6	+ 5.3
+10	+ 3.9	+ 1.2	- 4.5	-10.7	-10.9	- 8.1	- 3.9	+ 0.3	+ 4.1
0	+ 3.6	+ 0.7	- 5.3	-10.6	-11.3	- 8.6	- 5.1	- 1.4	+ 2.4
-10	+ 2.0	- 0.8	- 6.1	-10.4	-11.1	- 8.5	- 5.5	- 2.5	+ 0.6
-20	+ 0.7	- 2.0	- 6.3	-10.2	-10.7	- 8.3	- 5.7	- 3.0	- 0.6
-30	- 0.2	- 2.3	- 6.0	- 9.3	-10.2	- 8.2	- 5.7	- 3.3	- 1.3
-40	+ 0.3	- 2.1	- 4.6	- 7.1	- 8.8	- 7.7	- 5.5	- 3.6	- 1.8
-50	+ 0.8	- 1.5	- 3.4	- 5.5	- 6.8	- 6.3	- 4.9	- 3.7	- 1.9
-60	+ 1.2	- 0.3	- 1.9	- 3.6	- 4.7	- 4.5	- 4.1	- 2.9	- 2.1
-70	+ 0.5	- 0.6	- 1.6	- 2.8	- 4.0	- 5.3	- 6.0	- 6.1	- 6.2
-80	- 2.6	- 3.3	- 4.1	- 5.0	- 6.0	- 7.3	- 8.6	- 9.7	-10.4

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[a] North latitudes positive, south latitudes negative

Table 18

Values of secular change in declination (D) for epoch 1932.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 16.3	+ 15.5	+ 14.6	+ 13.7	+ 12.7	+ 11.4	+ 10.0	+ 7.7	+ 4.0
+70	+ 14.0	+ 13.1	+ 12.0	+ 10.5	+ 9.1	+ 8.0	+ 6.8	+ 4.9	+ 2.3
+60	+ 12.1	+ 11.0	+ 9.0	+ 7.0	+ 4.8	+ 2.5	+ 1.4	0.0	- 2.0
+50	+ 10.8	+ 10.6	+ 9.1	+ 6.9	+ 3.9	+ 1.4	- 0.7	- 2.2	- 3.3
+40	+ 8.8	+ 9.3	+ 9.0	+ 7.2	+ 3.7	+ 1.1	- 1.2	- 2.6	- 3.7
+30	+ 7.2	+ 8.1	+ 8.1	+ 6.1	+ 3.1	+ 0.7	- 1.3	- 2.7	- 3.6
+20	+ 6.2	+ 7.2	+ 7.6	+ 5.6	+ 2.9	+ 0.4	- 1.3	- 2.9	- 3.4
+10	+ 5.2	+ 6.3	+ 7.1	+ 5.3	+ 2.7	0.0	- 2.1	- 3.4	- 3.3
0	+ 4.2	+ 5.5	+ 6.5	+ 5.1	+ 2.3	- 0.8	- 4.0	- 4.6	- 3.5
-10	+ 3.2	+ 4.7	+ 5.7	+ 4.5	+ 1.8	- 1.9	- 5.6	- 6.7	- 4.5
-20	+ 1.9	+ 3.8	+ 5.1	+ 3.5	+ 0.5	- 5.2	- 9.7	- 10.8	- 6.6
-30	+ 0.7	+ 2.6	+ 3.2	+ 2.8	- 0.9	- 9.1	- 15.8	- 16.0	- 11.1
-40	+ 0.4	+ 1.7	+ 2.8	+ 2.0	- 1.7	- 9.1	- 15.8	- 17.6	- 13.6
-50	+ 1.6	+ 2.4	+ 1.8	+ 1.4	- 0.5	- 3.9	- 8.9	- 11.7	- 10.7
-60	- 0.3	+ 0.7	+ 1.8	+ 2.6	+ 1.3	0.0	- 2.9	- 5.0	- 5.7
-70	- 6.0	- 4.8	- 3.6	- 3.1	- 3.0	- 3.6	- 4.6	- 5.9	- 7.0
-80	- 11.3	- 11.6	- 11.7	- 11.9	- 12.1	- 12.5	- 13.0	- 13.8	- 14.9

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	0.0	- 4.8	- 9.5	- 14.0	- 16.7	- 18.1	- 18.2	- 17.5	- 16.8
+70	- 1.6	- 7.1	- 11.1	- 12.9	- 13.3	- 12.5	- 11.4	- 10.1	- 8.8
+60	- 3.9	- 5.9	- 7.2	- 7.6	- 7.1	- 6.1	- 5.7	- 5.3	- 4.7
+50	- 4.4	- 5.1	- 4.5	- 3.8	- 3.4	- 3.7	- 3.5	- 3.2	- 2.8
+40	- 4.3	- 3.9	- 2.8	- 1.2	- 0.8	- 2.0	- 2.4	- 2.2	- 1.8
+30	- 3.6	- 2.7	- 1.6	- 0.1	- 0.2	- 1.4	- 1.7	- 1.6	- 1.1
+20	- 2.8	- 1.7	- 0.7	+ 0.3	+ 0.3	- 0.9	- 1.2	- 1.0	- 0.3
+10	- 1.8	- 0.8	- 0.1	+ 1.0	+ 1.2	+ 0.2	- 0.4	- 0.1	+ 0.5
0	- 1.0	+ 0.4	+ 0.8	+ 0.7	+ 1.0	+ 0.7	- 0.5	+ 0.1	+ 0.8
-10	- 1.4	+ 2.3	+ 2.2	+ 1.2	+ 0.8	+ 0.3	- 0.4	- 0.4	+ 0.5
-20	- 3.0	+ 2.0	+ 3.5	+ 2.5	+ 1.6	+ 0.9	+ 0.4	+ 0.3	+ 0.7
-30	- 6.5	- 1.2	+ 3.7	+ 4.6	+ 3.4	+ 2.3	+ 1.1	+ 0.7	+ 1.3
-40	- 10.4	- 6.0	+ 0.6	+ 5.4	+ 5.8	+ 4.4	+ 1.6	+ 1.1	+ 1.9
-50	- 9.5	- 7.0	- 3.6	+ 2.2	+ 3.0	+ 2.0	0.0	+ 0.6	+ 3.8
-60	- 5.5	- 5.0	- 5.2	- 6.5	- 6.7	- 1.0	+ 5.9	+ 10.6	+ 14.7
-70	- 8.1	- 9.4	- 11.8	- 15.9	- 35.0	-150.0	+ 25.0	+ 75.0	+ 42.0
-80	- 16.6	- 19.6	- 26.0	- 32.0	- 34.0	- 33.0	- 27.0	- 20.0	- 15.6

[a] North latitudes positive, south latitudes negative

Table 18--Concluded

Values of secular change in declination (D) for epoch 1932.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 16.6	- 16.7	- 17.1	- 18.5	- 23.0	- 31.0	- 32.0	- 20.5	+ 12.0
+70	- 7.6	- 6.7	- 6.1	- 6.4	- 7.3	- 9.6	- 13.6	- 27.0	- 33.0
+60	- 4.1	- 3.2	- 2.6	- 2.3	- 2.7	- 3.7	- 5.7	- 8.4	- 12.4
+50	- 2.3	- 1.8	- 1.3	- 1.1	- 1.3	- 2.1	- 3.0	- 4.3	- 6.0
+40	- 1.3	- 0.8	- 0.6	- 0.3	- 0.3	- 0.5	- 0.7	- 1.0	- 1.0
+30	- 0.6	- 0.2	+ 0.2	+ 0.4	+ 0.7	+ 0.9	+ 1.2	+ 1.4	+ 1.4
+20	+ 0.2	+ 0.7	+ 0.9	+ 1.2	+ 1.3	+ 1.5	+ 1.9	+ 2.7	+ 3.3
+10	+ 1.1	+ 1.6	+ 1.9	+ 2.1	+ 2.1	+ 1.9	+ 1.8	+ 2.0	+ 2.2
0	+ 1.6	+ 2.3	+ 2.6	+ 2.7	+ 2.7	+ 2.5	+ 2.2	+ 1.8	+ 1.2
-10	+ 1.4	+ 2.1	+ 2.9	+ 3.3	+ 3.3	+ 2.8	+ 2.3	+ 2.0	+ 0.9
-20	+ 1.5	+ 2.6	+ 3.6	+ 4.4	+ 4.3	+ 3.6	+ 3.0	+ 2.0	+ 0.8
-30	+ 2.1	+ 3.3	+ 4.7	+ 5.5	+ 5.2	+ 4.1	+ 3.0	+ 1.9	+ 0.8
-40	+ 3.4	+ 4.8	+ 6.2	+ 7.0	+ 6.2	+ 5.0	+ 3.4	+ 2.0	+ 1.0
-50	+ 7.4	+ 9.2	+ 10.0	+ 9.5	+ 8.3	+ 6.1	+ 4.2	+ 2.6	+ 1.3
-60	+ 16.0	+ 16.1	+ 14.4	+ 12.4	+ 10.8	+ 8.4	+ 6.3	+ 4.0	+ 2.2
-70	+ 26.2	+ 16.0	+ 12.6	+ 9.9	+ 7.7	+ 5.7	+ 4.3	+ 3.2	+ 2.2
-80	- 12.4	- 10.0	- 7.7	- 5.8	- 4.3	- 3.5	- 3.0	- 2.7	- 2.8

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 34.5	+ 32.0	+ 27.0	+ 23.0	+ 19.9	+ 19.2	+ 18.4	+ 17.7	+ 17.1
+70	+ 22.0	+ 24.0	+ 21.0	+ 17.9	+ 16.6	+ 15.8	+ 15.5	+ 15.2	+ 14.7
+60	- 11.9	- 0.6	+ 6.2	+ 8.6	+ 11.2	+ 11.8	+ 12.3	+ 12.4	+ 12.4
+50	- 6.1	- 4.7	- 2.4	+ 1.2	+ 4.5	+ 6.8	+ 8.5	+ 9.8	+ 10.4
+40	- 1.0	- 2.7	- 4.5	- 3.7	0.0	+ 3.0	+ 5.0	+ 6.7	+ 7.9
+30	+ 1.0	- 1.2	- 5.4	- 6.9	- 3.5	+ 0.2	+ 2.8	+ 4.7	+ 6.2
+20	+ 3.1	+ 0.2	- 5.0	- 9.3	- 6.1	- 2.4	+ 1.0	+ 3.3	+ 4.8
+10	+ 1.7	- 0.2	- 4.8	- 10.9	- 8.2	- 4.8	- 1.1	+ 1.8	+ 3.8
0	+ 0.3	- 1.2	- 5.0	- 10.0	- 9.7	- 6.3	- 3.0	+ 0.2	+ 2.6
-10	- 0.1	- 1.9	- 5.9	- 9.7	- 9.9	- 7.6	- 4.7	- 1.5	- 1.4
-20	- 0.2	- 2.2	- 6.3	- 9.2	- 9.2	- 7.0	- 5.0	- 2.6	- 0.2
-30	- 0.2	- 2.3	- 5.8	- 8.6	- 8.1	- 6.0	- 4.7	- 3.1	- 1.3
-40	- 0.2	- 2.0	- 4.9	- 6.8	- 6.9	- 5.8	- 4.4	- 3.0	- 1.3
-50	+ 0.1	- 1.4	- 3.4	- 5.1	- 5.9	- 5.4	- 4.3	- 2.7	- 0.4
-60	+ 0.4	- 0.8	- 1.9	- 3.3	- 4.7	- 4.8	- 4.2	- 3.0	- 1.4
-70	+ 1.0	0.0	- 1.2	- 2.4	- 3.9	- 5.3	- 6.2	- 6.6	- 6.4
-80	- 3.0	- 3.5	- 4.3	- 5.0	- 6.2	- 7.5	- 9.0	- 10.5	- 11.3

[a] North latitudes positive, south latitudes negative

Table 19

Values of secular change in declination (D) for epoch 1942.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+15.0	+14.9	+14.9	+15.0	+15.3	+15.4	+15.3	+14.6	+12.9
+70	+10.5	+10.0	+ 9.6	+ 9.1	+ 8.8	+ 8.3	+ 7.5	+ 6.3	+ 4.2
+60	+ 9.7	+ 8.7	+ 7.4	+ 6.0	+ 4.3	+ 2.8	+ 1.3	- 0.3	- 2.0
+50	+ 9.2	+ 8.8	+ 7.7	+ 5.6	+ 3.2	+ 1.3	- 0.4	- 2.0	- 3.4
+40	+ 8.1	+ 8.2	+ 7.4	+ 5.2	+ 2.4	+ 0.3	- 1.3	- 2.7	- 3.8
+30	+ 6.6	+ 7.0	+ 6.3	+ 4.3	+ 2.0	- 0.1	- 1.8	- 3.0	- 3.6
+20	+ 5.1	+ 5.7	+ 5.4	+ 3.9	+ 1.6	- 0.5	- 2.1	- 2.8	- 3.0
+10	+ 3.7	+ 4.2	+ 4.5	+ 3.4	+ 1.1	- 1.0	- 2.2	- 2.6	- 2.2
0	+ 2.6	+ 3.2	+ 3.9	+ 2.9	+ 0.6	- 2.0	- 3.7	- 3.3	- 2.1
-10	+ 1.7	+ 2.6	+ 3.3	+ 2.3	- 0.6	- 7.0	- 6.4	- 4.7	- 3.0
-20	+ 1.0	+ 2.1	+ 3.0	+ 1.7	- 3.6	-13.8	-10.3	- 7.7	- 5.0
-30	+ 0.4	+ 1.7	+ 2.5	+ 0.5	- 6.2	-18.0	-16.0	-12.4	- 9.2
-40	- 0.1	+ 1.0	+ 2.0	- 0.8	- 7.5	-15.2	-17.7	-15.1	-13.6
-50	- 0.4	+ 0.4	+ 0.1	- 2.2	- 6.2	-11.0	-14.5	-14.5	-14.8
-60	- 1.2	- 1.3	- 1.7	- 2.7	- 3.7	- 5.6	- 7.3	- 8.2	- 9.0
-70	- 2.9	- 2.9	- 3.4	- 4.6	- 5.3	- 5.4	- 5.2	- 5.0	- 5.1
-80	-10.7	-11.0	-11.5	-12.5	-13.5	-14.3	-15.2	-15.6	-16.1

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+10.2	+ 5.0	- 1.6	- 9.4	-16.1	-20.5	-22.0	-21.5	-20.0
+70	+ 0.2	- 4.8	-10.2	-13.0	-13.6	-12.3	-10.8	- 9.3	- 7.8
+60	- 3.4	- 4.9	- 6.0	- 6.0	- 5.2	- 4.9	- 4.8	- 4.8	- 4.2
+50	- 4.5	- 5.2	- 4.7	- 3.7	- 2.9	- 3.1	- 3.4	- 3.2	- 2.7
+40	- 4.3	- 4.0	- 3.1	- 2.2	- 1.1	- 2.1	- 2.5	- 1.9	- 1.4
+30	- 3.4	- 2.7	- 1.8	- 0.7	- 0.6	- 1.7	- 1.7	- 1.2	- 0.6
+20	- 2.5	- 1.7	- 0.7	+ 0.2	- 0.2	- 1.3	- 1.3	- 0.7	- 0.1
+10	- 1.5	- 0.7	+ 0.4	+ 1.0	- 0.1	- 1.0	- 1.0	- 0.4	+ 0.2
0	- 0.9	+ 0.3	+ 1.2	+ 1.3	0.0	- 0.6	- 0.6	- 0.2	+ 0.5
-10	- 1.3	+ 0.7	+ 2.0	+ 1.9	+ 0.5	- 0.1	- 0.2	+ 0.2	+ 0.8
-20	- 2.7	+ 0.3	+ 3.0	+ 3.1	+ 1.6	+ 1.0	+ 0.8	+ 1.2	+ 1.6
-30	- 6.0	- 2.1	+ 2.0	+ 4.4	+ 3.0	+ 2.2	+ 1.8	+ 2.1	+ 2.8
-40	-11.0	- 7.6	- 3.5	+ 1.7	+ 3.3	+ 3.6	+ 3.4	+ 3.7	+ 4.7
-50	-14.8	-14.0	-12.0	- 6.3	- 0.2	+ 5.4	+ 6.7	+ 7.4	+ 8.6
-60	- 9.6	-10.0	-10.0	- 9.5	- 5.1	+ 7.8	+14.5	+17.5	+18.5
-70	- 5.1	- 4.7	- 6.0	- 7.0	- 8.3	-17.0	-42.0	- 5.0	+ 6.0
-80	-17.0	-18.4	-21.5	-27.0	-38.5	-53.0	-53.0	-40.0	-27.0

[a] North latitudes positive, south latitudes negative

Table 19--Concluded

Values of secular change in declination (D) for epoch 1942.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-19.7	-19.0	-19.0	-21.5	-28.0	-35.0	-32.0	- 4.0	+41.5
+70	- 6.7	- 5.8	- 5.4	- 5.5	- 6.0	- 7.9	-11.0	-20.0	-16.5
+60	- 3.7	- 3.2	- 2.6	- 2.4	- 3.1	- 4.7	- 7.0	- 8.7	- 9.8
+50	- 2.1	- 1.7	- 1.2	- 1.1	- 1.5	- 2.4	- 3.6	- 4.6	- 4.8
+40	- 0.9	- 0.4	- 0.1	0.0	- 0.3	- 1.0	- 1.7	- 2.1	- 1.7
+30	+ 0.1	+ 0.6	+ 0.9	+ 0.9	+ 0.6	+ 0.1	- 0.7	- 1.1	- 0.7
+20	+ 0.6	+ 1.2	+ 1.8	+ 1.9	+ 1.4	+ 0.8	+ 0.2	- 0.2	- 0.2
+10	+ 0.9	+ 1.7	+ 2.4	+ 2.6	+ 2.2	+ 1.5	+ 0.9	+ 0.7	+ 0.7
0	+ 1.2	+ 2.1	+ 2.9	+ 3.2	+ 2.9	+ 2.3	+ 1.8	+ 1.5	+ 1.5
-10	+ 1.7	+ 2.6	+ 3.3	+ 3.8	+ 3.6	+ 3.1	+ 2.6	+ 2.1	+ 1.2
-20	+ 2.4	+ 3.4	+ 4.4	+ 4.7	+ 4.6	+ 3.9	+ 3.0	+ 1.9	+ 0.7
-30	+ 3.5	+ 4.5	+ 5.6	+ 6.0	+ 5.7	+ 4.8	+ 3.4	+ 1.9	+ 0.2
-40	+ 5.5	+ 6.6	+ 7.3	+ 7.6	+ 7.1	+ 5.8	+ 3.9	+ 2.0	+ 0.3
-50	+10.5	+12.6	+12.0	+ 9.9	+ 8.5	+ 6.4	+ 4.0	+ 2.1	+ 0.7
-60	+19.0	+17.7	+15.3	+12.3	+ 9.7	+ 6.1	+ 3.0	+ 1.4	- 0.1
-70	+ 8.6	+ 7.8	+ 5.9	+ 3.7	+ 1.8	+ 0.3	- 1.2	- 2.0	- 2.7
-80	-20.5	-17.0	-14.9	-13.7	-13.2	-13.0	-13.2	-13.7	-14.3

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+45.5	+40.0	+32.0	+27.5	+22.5	+19.0	+17.2	+16.0	+15.4
+70	+16.5	+25.0	+22.5	+18.4	+16.1	+14.6	+13.3	+12.2	+11.2
+60	- 3.8	+ 3.8	+ 7.4	+ 9.7	+10.9	+11.4	+11.4	+10.9	+10.4
+50	- 3.4	- 1.6	+ 0.5	+ 2.9	+ 5.3	+ 7.3	+ 8.6	+ 8.9	+ 8.8
+40	- 0.3	+ 0.2	- 1.0	- 1.0	+ 0.8	+ 3.2	+ 5.0	+ 6.2	+ 7.2
+30	+ 0.6	0.0	- 2.2	- 4.1	- 2.2	+ 0.1	+ 2.5	+ 4.3	+ 5.7
+20	+ 1.1	- 0.2	- 3.0	- 6.6	- 4.9	- 2.1	+ 0.6	+ 2.5	+ 4.2
+10	+ 1.3	- 0.9	- 4.4	- 7.2	- 5.9	- 3.8	- 1.0	+ 1.1	+ 2.8
0	+ 0.6	- 2.2	- 5.8	- 7.3	- 6.1	- 4.3	- 2.0	0.0	+ 1.6
-10	- 0.5	- 3.6	- 7.1	- 7.2	- 6.0	- 4.4	- 2.7	- 0.9	+ 0.6
-20	- 1.0	- 3.9	- 6.5	- 7.1	- 5.9	- 4.4	- 2.9	- 1.5	- 0.2
-30	- 1.2	- 3.2	- 5.2	- 6.2	- 5.7	- 4.3	- 3.0	- 1.9	- 0.8
-40	- 1.1	- 2.3	- 3.9	- 5.0	- 5.1	- 4.0	- 3.0	- 2.1	- 1.1
-50	- 0.7	- 1.9	- 3.0	- 3.9	- 4.2	- 3.6	- 2.8	- 2.0	- 1.2
-60	- 1.1	- 2.1	- 2.8	- 3.5	- 3.5	- 3.3	- 2.7	- 1.9	- 1.5
-70	- 3.4	- 4.0	- 4.6	- 5.1	- 5.3	- 4.7	- 4.0	- 3.4	- 3.0
-80	-14.8	-15.0	-15.1	-16.0	-14.7	-14.0	-12.9	-11.7	-11.0

[a] North latitudes positive, south latitudes negative

Table 20

Values of secular change in horizontal intensity (H) of magnetic field for 1912.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 19	- 19	- 19	- 19	- 21	- 22	- 24	- 26	- 28
+70	- 9	- 12	- 17	- 21	- 26	- 31	- 36	- 38	- 40
+60	- 16	- 20	- 30	- 40	- 46	- 52	- 59	- 62	- 61
+50	- 4	- 12	- 24	- 36	- 47	- 59	- 71	- 79	- 76
+40	+ 11	+ 1	- 9	- 19	- 31	- 45	- 60	- 63	- 52
+30	+ 24	+ 17	+ 8	- 2	- 13	- 25	- 34	- 29	- 19
+20	+ 20	+ 19	+ 17	+ 11	+ 2	- 9	- 11	- 1	+ 15
+10	+ 1	+ 2	+ 4	+ 3	- 1	- 7	- 4	+ 11	+ 30
0	- 21	- 19	- 16	- 16	- 18	- 19	- 10	+ 6	+ 20
-10	- 39	- 40	- 41	- 42	- 40	- 29	- 14	- 1	+ 10
-20	- 58	- 62	- 70	- 72	- 56	- 37	- 18	- 6	- 1
-30	- 86	- 98	-108	-106	- 78	- 43	- 20	- 14	- 18
-40	-130	-134	-118	- 90	- 56	- 22	- 9	- 2	- 4
-50	- 98	- 90	- 77	- 57	- 28	+ 1	+ 21	+ 37	+ 38
-60	- 56	- 46	- 31	- 15	+ 9	+ 33	+ 52	+ 66	+ 72
-70	- 20	- 8	+ 7	+ 24	+ 37	+ 52	+ 64	+ 68	+ 61
-80	+ 21	+ 26	+ 31	+ 37	+ 41	+ 45	+ 46	+ 44	+ 39

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 29	- 30	- 30	- 29	- 28	- 27	- 26	- 24	- 23
+70	- 41	- 41	- 39	- 36	- 33	- 29	- 27	- 24	- 22
+60	- 57	- 51	- 43	- 37	- 30	- 25	- 21	- 19	- 16
+50	- 64	- 49	- 39	- 28	- 20	- 13	- 8	- 8	- 9
+40	- 37	- 25	- 12	- 6	- 5	- 6	- 8	- 9	- 10
+30	- 5	+ 6	+ 10	+ 9	+ 8	+ 7	+ 6	+ 3	+ 1
+20	+ 31	+ 34	+ 22	+ 15	+ 12	+ 10	+ 11	+ 12	+ 9
+10	+ 38	+ 29	+ 19	+ 10	+ 4	+ 1	0	+ 5	+ 7
0	+ 24	+ 18	+ 10	+ 1	- 6	- 9	- 9	- 6	- 4
-10	+ 9	+ 5	- 5	- 13	- 17	- 17	- 17	- 18	- 19
-20	- 10	- 17	- 26	- 31	- 29	- 27	- 28	- 32	- 37
-30	- 42	- 57	- 60	- 48	- 37	- 32	- 34	- 35	- 38
-40	- 28	- 48	- 50	- 38	- 25	- 20	- 22	- 22	- 21
-50	+ 24	+ 3	- 5	- 6	- 4	- 10	- 19	- 22	- 23
-60	+ 62	+ 46	+ 32	+ 19	- 1	- 19	- 26	- 30	- 30
-70	+ 50	+ 41	+ 28	+ 10	- 12	- 29	- 42	+ 20	+ 32
-80	+ 36	+ 30	+ 28	+ 30	+ 36	+ 45	+ 55	+ 63	+ 70

[a] North latitudes positive, south latitudes negative

Table 20--Concluded

Values of secular change in horizontal intensity (H) of magnetic field for 1912.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 21	- 19	- 18	- 16	- 15	- 15	- 16	- 18	- 21
+70	- 19	- 16	- 12	- 8	- 4	- 1	+ 1	- 2	+ 6
+60	- 13	- 10	- 5	+ 1	+ 5	+ 6	+ 3	0	+ 5
+50	- 9	- 10	- 10	- 10	- 9	- 9	- 10	- 14	- 16
+40	- 11	- 13	- 16	- 18	- 22	- 25	- 30	- 37	- 46
+30	- 3	- 10	- 17	- 22	- 26	- 32	- 40	- 52	- 72
+20	+ 1	- 9	- 17	- 23	- 24	- 27	- 34	- 47	- 62
+10	0	- 10	- 19	- 25	- 19	- 14	- 12	- 21	- 34
0	- 8	- 17	- 25	- 29	- 29	- 23	- 12	0	+ 6
-10	- 23	- 30	- 36	- 39	- 42	- 42	- 32	- 15	+ 5
-20	- 41	- 44	- 47	- 50	- 53	- 54	- 52	- 37	- 18
-30	- 38	- 38	- 38	- 38	- 38	- 37	- 37	- 37	- 34
-40	- 20	- 18	- 18	- 17	- 17	- 17	- 18	- 20	- 27
-50	- 19	- 9	+ 3	+ 9	+ 12	+ 8	+ 3	- 5	- 15
-60	- 22	- 9	+ 6	+ 17	+ 23	+ 22	+ 18	+ 9	- 2
-70	+ 32	+ 35	+ 37	+ 38	+ 39	+ 38	+ 34	+ 25	+ 12
-80	+ 75	+ 80	+ 83	+ 76	+ 68	+ 61	+ 52	+ 43	+ 34

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 21	- 21	- 21	- 21	- 21	- 21	- 20	- 20	- 19
+70	+ 14	+ 10	+ 8	+ 5	+ 2	0	- 1	- 4	- 7
+60	+ 19	+ 29	+ 27	+ 18	+ 14	+ 4	- 4	- 8	- 13
+50	- 13	- 9	- 1	+ 4	+ 9	+ 9	+ 10	+ 7	+ 3
+40	- 57	- 65	- 58	- 36	- 17	+ 5	+ 22	+ 27	+ 18
+30	- 97	-116	-108	- 77	- 45	- 11	+ 16	+ 33	+ 33
+20	- 82	-105	-121	- 95	- 50	- 10	+ 15	+ 24	+ 21
+10	- 49	- 62	- 68	- 54	- 20	+ 5	+ 11	+ 6	+ 2
0	+ 11	+ 9	+ 3	+ 2	+ 12	+ 13	- 1	- 13	- 19
-10	+ 18	+ 30	+ 30	+ 25	+ 18	+ 3	- 13	- 27	- 37
-20	- 5	+ 2	+ 3	- 3	- 10	- 21	- 32	- 42	- 52
-30	- 26	- 22	- 26	- 32	- 38	- 44	- 52	- 60	- 71
-40	- 39	- 49	- 56	- 62	- 69	- 77	- 90	-105	-119
-50	- 28	- 38	- 52	- 67	- 84	- 98	-106	-108	-105
-60	- 15	- 26	- 36	- 45	- 54	- 64	- 71	- 68	- 65
-70	- 1	- 13	- 21	- 26	- 30	- 33	- 33	- 31	- 26
-80	+ 25	+ 17	+ 12	+ 8	+ 7	+ 7	+ 8	+ 11	+ 15

[a] North latitudes positive, south latitudes negative

Table 21

Values of secular change in horizontal intensity (H) of magnetic field for 1922.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 27	- 27	- 27	- 28	-29	-30	-32	-34	-36
+70	- 19	- 23	- 27	- 30	-34	-37	-38	-40	-43
+60	- 13	- 21	- 29	- 38	-46	-54	-61	-63	-64
+50	- 6	- 13	- 23	- 32	-42	-54	-63	-69	-61
+40	+ 8	+ 1	- 8	- 17	-28	-38	-44	-44	-37
+30	+ 21	+ 14	+ 8	+ 1	- 8	-15	-18	-17	-11
+20	+ 18	+ 19	+ 15	+ 11	+ 5	+ 4	+ 6	+11	+16
+10	0	+ 2	+ 3	+ 5	+ 5	+12	+23	+32	+40
0	- 20	- 20	- 18	- 17	-13	- 7	+ 6	+18	+29
-10	- 39	- 42	- 44	- 46	-42	-32	-17	- 1	+ 8
-20	- 63	- 70	- 80	- 83	-70	-53	-37	-19	-16
-30	- 90	-104	-118	-113	-87	-59	-44	-34	-42
-40	-118	-120	-105	- 89	-65	-34	-18	- 9	-24
-50	- 90	- 80	- 71	- 51	-23	+ 6	+20	+27	+12
-60	- 50	- 38	- 23	- 4	+21	+42	+52	+56	+50
-70	- 12	- 1	+ 12	+ 24	+37	+47	+53	+53	+49
-80	+ 30	+ 35	+ 40	+ 45	+49	+52	+54	+53	+52

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-37	-38	-37	-35	-33	-30	-27	-23	-19
+70	-46	-46	-44	-41	-37	-33	-29	-26	-23
+60	-61	-52	-43	-37	-31	-27	-25	-23	-22
+50	-48	-38	-32	-26	-22	-19	-17	-14	-14
+40	-28	-21	-16	-12	- 9	- 7	- 7	- 8	-12
+30	- 5	+ 1	+ 2	+ 2	+ 2	+ 2	0	- 5	-10
+20	+18	+17	+15	+12	+ 8	+ 3	- 1	- 7	-12
+10	+36	+28	+22	+13	+ 6	+ 2	- 2	- 8	-13
0	+27	+21	+14	+ 6	- 2	- 7	-10	-12	-14
-10	+12	+ 9	+ 4	- 4	- 9	-13	-15	-15	-15
-20	-18	-19	-16	-15	-17	-18	-19	-19	-19
-30	-49	-45	-40	-34	-30	-27	-25	-22	-25
-40	-39	-43	-45	-40	-30	-25	-23	-22	-26
-50	+ 3	- 6	-11	-15	-14	-14	-16	-20	-19
-60	+39	+30	+22	+10	- 10	-22	-25	-23	-18
-70	+40	+29	+16	+ 2	-12	-17	-10	+20	+24
-80	+49	+45	+43	+42	+44	+48	+55	+63	+70

[a] North latitudes positive, south latitudes negative

Table 21--Concluded

Values of secular change in horizontal intensity (H) of magnetic field for 1922.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-16	-12	- 9	- 9	-12	-15	-18	-22	-27
+70	-19	-14	- 9	- 7	- 3	- 2	- 2	0	+18
+60	-17	-12	- 8	- 8	- 9	- 9	- 8	- 4	+ 2
+50	-15	-15	-17	-19	-21	-22	-23	-25	-21
+40	-16	-19	-23	-26	-28	-32	-35	-41	-47
+30	-16	-22	-27	-32	-36	-40	-45	-52	-60
+20	-19	-25	-31	-34	-38	-42	-44	-47	-49
+10	-20	-26	-30	-33	-35	-37	-38	-38	-39
0	-18	-23	-27	-28	-29	-30	-31	-30	-25
-10	-17	-19	-22	-25	-28	-32	-32	-28	-23
-20	-20	-22	-24	-26	-28	-32	-34	-34	-33
-30	-28	-30	-31	-32	-33	-32	-32	-36	-42
-40	-28	-31	-31	-28	-24	-23	-25	-32	-42
-50	-17	-13	-10	- 7	- 6	- 8	-13	-21	-31
-60	- 9	+ 1	+ 9	+15	+18	+20	+15	+ 7	- 6
-70	+31	+39	+44	+47	+47	+44	+41	+35	+26
-80	+78	+83	+84	+82	+77	+72	+66	+60	+54

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	-31	-26	-23	-22	- 22	- 23	- 24	- 26	- 27
+70	+14	+ 7	+ 4	0	- 3	- 7	- 11	- 13	- 16
+60	+11	+18	+20	+14	+ 8	+ 1	- 3	- 5	- 8
+50	-16	- 8	- 1	+ 7	+ 12	+ 9	+ 7	+ 4	+ 1
+40	-51	-50	-40	-24	- 8	+ 7	+ 16	+ 17	+ 12
+30	-68	-77	-69	-49	- 24	- 1	+ 14	+ 25	+ 25
+20	-61	-73	-78	-58	- 31	- 1	+ 15	+ 22	+ 20
+10	-46	-54	-53	-39	- 18	+ 4	+ 11	+ 7	+ 2
0	-26	-23	-19	-11	0	+ 2	- 6	- 12	- 17
-10	-21	-19	-15	-11	- 12	- 18	- 26	- 32	- 37
-20	-37	-39	-37	-33	- 30	- 35	- 42	- 50	- 57
-30	-51	-54	-57	-55	- 52	- 57	- 65	- 73	- 81
-40	-53	-63	-76	-84	- 86	- 88	- 92	- 98	-104
-50	-44	-61	-76	-94	-110	-113	-114	-113	-100
-60	-21	-37	-53	-65	- 74	- 82	- 81	- 72	- 61
-70	+13	0	-12	-21	- 27	- 30	- 30	- 27	- 21
-80	+49	+42	+35	+29	+ 24	+ 22	+ 21	+ 23	+ 26

[a] North latitudes positive, south latitudes negative

Table 22

Values of secular change in horizontal intensity (H) of magnetic field for 1932.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 37	- 40	- 42	- 44	- 46	- 47	- 46	- 45	- 43
+70	- 30	- 35	- 40	- 46	- 51	- 52	- 54	- 54	- 54
+60	- 18	- 24	- 32	- 40	- 48	- 52	- 52	- 49	- 44
+50	- 6	- 12	- 20	- 26	- 32	- 35	- 34	- 29	- 22
+40	+ 15	+ 10	+ 4	- 2	- 7	- 10	- 7	0	+ 4
+30	+ 33	+ 32	+ 27	+ 20	+ 16	+ 15	+ 19	+ 24	+ 29
+20	+ 21	+ 22	+ 23	+ 25	+ 23	+ 26	+ 33	+ 42	+ 51
+10	- 7	- 3	- 1	+ 3	+ 9	+ 15	+ 25	+ 42	+ 55
0	- 33	- 32	- 28	- 23	- 17	- 7	+ 7	+ 25	+ 39
-10	- 61	- 61	- 56	- 52	- 43	- 32	- 14	+ 3	+ 9
-20	- 81	- 82	- 82	- 81	- 71	- 57	- 43	- 32	- 24
-30	- 96	-100	-102	- 93	- 69	- 47	- 34	- 30	- 44
-40	- 91	- 87	- 78	- 64	- 45	- 23	- 8	- 3	- 20
-50	- 67	- 60	- 47	- 32	- 12	+ 5	+ 15	+ 24	+ 19
-60	- 37	- 27	- 13	+ 1	+ 19	+ 35	+ 43	+ 44	+ 37
-70	+ 1	+ 10	+ 21	+ 33	+ 42	+ 46	+ 46	+ 46	+ 40
-80	+ 47	+ 53	+ 68	+ 64	+ 70	+ 73	+ 74	+ 71	+ 66

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 40	- 38	- 36	- 33	- 31	- 28	- 26	- 24	- 22
+70	- 52	- 48	- 41	- 35	- 31	- 27	- 24	- 21	- 18
+60	- 39	- 31	- 24	- 18	- 13	- 12	- 14	- 17	- 16
+50	- 15	- 8	- 3	- 1	0	- 3	- 6	- 7	- 7
+40	+ 10	+ 14	+ 12	+ 7	+ 5	+ 3	+ 2	+ 2	+ 1
+30	+ 32	+ 30	+ 20	+ 12	+ 9	+ 9	+ 8	+ 8	+ 7
+20	+ 47	+ 34	+ 23	+ 17	+ 17	+ 15	+ 14	+ 13	+ 10
+10	+ 45	+ 33	+ 23	+ 15	+ 10	+ 7	+ 6	+ 4	+ 3
0	+ 40	+ 28	+ 10	- 10	- 12	- 12	- 13	- 11	- 9
-10	+ 10	+ 8	+ 6	- 1	- 11	- 20	- 25	- 29	- 30
-20	- 20	- 20	- 4	- 6	- 9	- 12	- 18	- 23	- 29
-30	- 48	- 41	- 13	+ 3	+ 2	- 3	- 11	- 19	- 24
-40	- 35	- 34	- 24	- 9	+ 2	+ 4	- 1	- 8	- 14
-50	+ 6	- 5	- 5	0	+ 2	+ 2	- 11	- 17	- 17
-60	+ 29	+ 21	+ 14	+ 4	- 9	- 18	- 20	- 19	- 9
-70	+ 29	+ 19	+ 7	- 6	- 17	- 10	+ 44	+ 40	+ 42
-80	+ 61	+ 66	+ 63	+ 64	+ 60	+ 68	+ 76	+ 83	+ 92

[a] North latitudes positive, south latitudes negative

Table 22--Concluded

Values of secular change in horizontal intensity (H) of magnetic field for 1932.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 21	- 19	- 18	- 18	- 18	- 19	- 22	- 27	- 31
+70	- 14	- 10	- 8	- 5	- 4	- 2	+ 2	+ 7	+ 21
+60	- 12	- 7	- 5	- 3	- 2	- 3	- 3	- 1	+ 5
+50	- 7	- 6	- 4	- 6	- 8	- 12	- 14	- 16	- 16
+40	0	- 1	- 5	- 9	- 14	- 18	- 23	- 30	- 40
+30	+ 5	0	- 6	- 12	- 17	- 23	- 30	- 44	- 59
+20	+ 4	- 2	- 8	- 14	- 20	- 27	- 37	- 48	- 57
+10	0	- 7	- 12	- 18	- 23	- 30	- 38	- 43	- 42
0	- 10	- 14	- 18	- 24	- 28	- 33	- 35	- 37	- 32
-10	- 31	- 28	- 29	- 31	- 35	- 37	- 37	- 34	- 27
-20	- 35	- 42	- 45	- 43	- 43	- 47	- 47	- 40	- 32
-30	- 31	- 36	- 40	- 42	- 45	- 49	- 50	- 47	- 47
-40	- 14	- 18	- 24	- 28	- 36	- 44	- 52	- 58	- 65
-50	- 11	- 8	- 6	- 7	- 12	- 19	- 32	- 44	- 53
-60	- 1	+ 7	+ 15	+ 20	+ 19	+ 13	+ 3	- 11	- 28
-70	+ 47	+ 52	+ 54	+ 55	+ 55	+ 54	+ 50	+ 43	+ 29
-80	+ 98	+101	+ 99	+ 95	+ 90	+ 86	+ 81	+ 74	+ 68

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 30	- 27	- 26	- 26	- 27	- 28	- 31	- 33	- 35
+70	+ 21	+ 13	+ 5	- 2	- 7	- 12	- 16	- 21	- 26
+60	+ 15	+ 20	+ 16	+ 16	+ 9	+ 3	- 3	- 7	- 12
+50	- 12	- 9	- 4	+ 1	+ 2	+ 3	+ 8	+ 4	- 2
+40	- 52	- 51	- 36	- 21	- 10	- 1	+ 10	+ 20	+ 18
+30	- 72	- 72	- 61	- 38	- 17	- 2	+ 9	+ 22	+ 35
+20	- 61	- 64	- 56	- 35	- 12	+ 2	+ 14	+ 22	+ 21
+10	- 39	- 36	- 32	- 20	- 4	+ 3	+ 2	- 2	- 3
0	- 28	- 21	- 14	- 8	- 6	- 11	- 18	- 22	- 30
-10	- 22	- 11	- 6	- 4	- 11	- 25	- 37	- 47	- 58
-20	- 26	- 19	- 17	- 18	- 28	- 39	- 54	- 68	- 77
-30	- 47	- 47	- 48	- 52	- 53	- 58	- 69	- 81	- 89
-40	- 70	- 73	- 78	- 79	- 80	- 80	- 82	- 88	- 90
-50	- 64	- 75	- 83	- 90	- 94	- 90	- 83	- 75	- 71
-60	- 43	- 53	- 61	- 68	- 72	- 68	- 60	- 53	- 46
-70	+ 13	- 1	- 13	- 24	- 28	- 28	- 25	- 18	- 8
-80	+ 62	+ 56	+ 50	+ 44	+ 41	+ 39	+ 39	+ 40	+ 43

[a] North latitudes positive, south latitudes negative

Table 23

Values of secular change in horizontal intensity (H) of magnetic field for 1942.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	-22	-24	-27	-29	-31	-33	-35	-35	-34
+70	-13	-17	-22	-27	-31	-32	-28	-26	-24
+60	- 1	- 8	-16	-22	-26	-22	-17	-15	-13
+50	+13	+ 7	+ 2	- 6	-11	-11	- 9	- 6	0
+40	+35	+30	+24	+20	+14	+14	+17	+22	+27
+30	+37	+42	+42	+36	+34	+34	+37	+42	+50
+20	+16	+22	+28	+36	+41	+45	+50	+55	+62
+10	0	+ 5	+11	+20	+30	+44	+58	+66	+61
0	-16	-13	- 9	- 1	+ 8	+29	+49	+55	+54
-10	-31	-31	-32	-28	-20	- 1	+25	+31	+32
-20	-57	-59	-63	-62	-48	-21	0	+ 3	+ 3
-30	-73	-79	-79	-67	-37	-16	-13	-15	-16
-40	-61	-53	-46	-29	-10	+ 2	+ 3	- 3	-13
-50	-43	-33	-19	- 3	+ 8	+18	+22	+19	+14
-60	-15	- 5	+ 7	+19	+32	+40	+47	+49	+47
-70	+17	+26	+36	+47	+56	+62	+65	+63	+57
-80	+58	+54	+54	+49	+47	+45	+43	+39	+36

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-33	-31	-30	-28	-26	-24	-23	-22	-20
+70	-22	-18	-14	- 9	- 5	- 2	+ 1	+ 3	+ 5
+60	-11	- 5	+ 2	+ 8	+13	+15	+14	+13	+11
+50	+ 9	+17	+22	+25	+20	+12	+ 8	+ 7	+ 7
+40	+34	+38	+35	+23	+16	+ 9	+ 7	+ 4	+ 2
+30	+53	+50	+37	+25	+17	+10	+ 7	+ 4	+ 1
+20	+57	+47	+35	+22	+13	+ 8	+ 6	+ 3	+ 1
+10	+53	+42	+30	+18	+11	+ 7	+ 3	+ 1	- 2
0	+47	+37	+27	+17	+ 9	+ 5	+ 1	- 3	- 8
-10	+33	+33	+25	+16	+ 8	+ 2	- 2	- 7	-12
-20	+ 7	+16	+24	+16	+ 8	+ 1	- 5	-11	-15
-30	-16	-11	+ 5	+22	+18	+ 9	0	- 8	-14
-40	-24	-29	-27	-20	- 4	+ 4	+ 1	- 4	- 7
-50	0	-15	-26	-31	-27	-20	- 9	- 4	- 2
-60	+35	+17	+ 2	-12	-25	-29	-18	- 5	+ 9
-70	+46	+33	+15	- 5	-24	-12	+36	+50	+64
-80	+32	+29	+30	+32	+37	+43	+52	+60	+68

[a] North latitudes positive, south latitudes negative

Table 23--Concluded

Values of secular change in horizontal intensity (H) of magnetic field for 1942.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 18	- 17	- 16	- 16	- 17	- 19	- 22	- 25	- 25
+70	+ 6	+ 5	+ 3	- 1	- 3	- 5	- 1	+ 8	+ 19
+60	+ 10	+ 9	+ 7	+ 7	+ 7	+ 8	+ 9	+ 11	+ 19
+50	+ 5	+ 5	+ 5	+ 4	+ 5	+ 6	+ 7	+ 10	+ 11
+40	+ 1	+ 0	- 2	- 2	- 2	- 2	- 2	0	+ 1
+30	- 3	- 5	- 7	- 8	- 9	- 10	- 11	- 12	- 12
+20	- 3	- 7	- 11	- 14	- 16	- 18	- 18	- 19	- 22
+10	- 6	- 9	- 14	- 19	- 23	- 25	- 27	- 28	- 32
0	- 12	- 17	- 22	- 27	- 31	- 33	- 36	- 37	- 40
-10	- 18	- 24	- 29	- 33	- 37	- 41	- 44	- 47	- 47
-20	- 20	- 26	- 31	- 37	- 42	- 49	- 53	- 54	- 48
-30	- 16	- 18	- 21	- 27	- 34	- 43	- 57	- 64	- 61
-40	- 7	- 8	- 10	- 13	- 18	- 26	- 39	- 54	- 68
-50	+ 1	+ 3	+ 4	+ 4	+ 4	+ 1	- 9	- 25	- 43
-60	+ 24	+ 33	+ 35	+ 35	+ 33	+ 26	+ 17	+ 5	- 14
-70	+ 83	+ 95	+ 94	+ 89	+ 78	+ 63	+ 52	+ 41	+ 30
-80	+ 77	+ 85	+ 92	+ 97	+101	+ 97	+ 90	+ 83	+ 78

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 21	- 18	- 17	- 16	- 16	- 17	- 18	- 19	- 20
+70	+ 15	+ 8	+ 5	+ 3	+ 1	- 2	- 4	- 7	- 10
+60	+ 25	+ 25	+ 22	+ 19	+ 18	+ 15	+ 10	+ 7	+ 2
+50	+ 13	+ 15	+ 18	+ 25	+ 27	+ 29	+ 29	+ 24	+ 19
+40	0	+ 4	+ 15	+ 27	+ 40	+ 44	+ 44	+ 43	+ 41
+30	- 13	- 10	0	+ 19	+ 34	+ 40	+ 35	+ 32	+ 33
+20	- 23	- 16	+ 5	+ 23	+ 27	+ 25	+ 17	+ 14	+ 12
+10	- 32	- 18	+ 1	+ 12	+ 17	+ 16	+ 7	+ 1	- 2
0	- 36	- 18	- 7	+ 1	+ 3	+ 1	- 7	- 15	- 17
-10	- 36	- 29	- 23	- 16	- 13	- 18	- 23	- 28	- 31
-20	- 43	- 45	- 45	- 41	- 37	- 38	- 42	- 48	- 53
-30	- 59	- 61	- 64	- 63	- 64	- 67	- 72	- 73	- 72
-40	- 75	- 83	- 90	- 92	- 92	- 87	- 82	- 74	- 67
-50	- 61	- 75	- 80	- 82	- 81	- 74	- 68	- 62	- 53
-60	- 32	- 44	- 54	- 57	- 55	- 50	- 43	- 36	- 25
-70	+ 17	+ 6	- 4	- 10	- 12	- 10	- 4	+ 3	+ 10
-80	+ 73	+ 70	+ 67	+ 64	+ 62	+ 61	+ 60	+ 59	+ 58

[a] North latitudes positive, south latitudes negative

Table 24

Values of secular change in vertical intensity (Z) of magnetic field for 1912.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 40	- 39	- 41	- 41	- 42	- 42	- 42	- 42	- 42
+70	- 30	+ 2	+ 2	- 26	- 31	- 31	- 31	- 31	- 31
+60	- 18	- 2	- 12	- 11	- 6	- 6	- 9	- 7	- 6
+50	- 19	- 27	- 17	+ 14	+ 33	+ 40	+ 40	+ 34	+ 28
+40	- 42	- 23	+ 8	+ 36	+ 56	+ 78	+ 86	+ 82	+ 72
+30	- 54	- 27	+ 2	+ 33	+ 66	+ 97	+117	+113	+102
+20	- 83	- 40	- 15	+ 18	+ 58	+ 94	+120	+113	+ 96
+10	-115	- 56	- 30	- 6	+ 58	+101	+104	+ 88	+ 60
0	-131	- 79	- 46	- 17	+ 66	+124	+ 89	+ 46	+ 4
-10	-130	- 93	- 50	- 11	+ 70	+147	+ 95	+ 43	- 6
-20	-113	- 74	- 31	+ 16	+110	+164	+119	+ 67	+ 8
-30	- 83	- 44	- 2	+ 55	+133	+173	+149	+ 98	+ 53
-40	- 33	- 4	+ 46	+ 87	+138	+172	+162	+123	+ 86
-50	+ 23	+ 46	+ 74	+105	+134	+156	+152	+122	+ 92
-60	+ 71	+ 75	+ 86	+103	+116	+122	+114	+ 95	+ 75
-70	+ 91	+ 83	+ 82	+ 83	+ 82	+ 80	+ 71	+ 59	+ 46
-80	+ 78	+ 73	+ 68	+ 63	+ 57	+ 51	+ 45	+ 38	+ 33

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 42	- 41	- 41	- 40	- 39	- 39	- 40	- 41	- 42
+70	- 32	- 32	- 32	- 31	- 27	- 27	- 32	- 35	- 40
+60	- 9	- 16	- 30	- 16	+ 2	+ 7	- 10	- 23	- 35
+50	+ 23	+ 9	- 5	- 12	+ 6	+ 22	+ 2	- 19	- 38
+40	+ 52	+ 31	+ 11	- 3	- 2	- 2	- 18	- 32	- 42
+30	+ 67	+ 33	+ 3	- 10	- 13	- 14	- 23	- 34	- 42
+20	+ 55	+ 11	- 12	- 22	- 18	- 18	- 24	- 34	- 41
+10	+ 6	- 22	- 33	- 33	- 25	- 23	- 29	- 36	- 43
0	- 32	- 60	- 60	- 37	- 27	- 25	- 30	- 37	- 45
-10	- 46	- 64	- 58	- 31	- 21	- 19	- 25	- 34	- 44
-20	- 32	- 37	- 28	- 16	- 13	- 15	- 19	- 29	- 37
-30	+ 7	- 4	- 5	- 3	- 4	- 11	- 17	- 24	- 25
-40	+ 46	+ 28	+ 21	+ 12	+ 6	- 2	- 11	- 14	- 12
-50	+ 66	+ 44	+ 30	+ 21	+ 14	+ 7	+ 2	- 4	- 3
-60	+ 57	+ 42	+ 27	+ 12	+ 5	- 1	- 6	- 12	- 10
-70	+ 35	+ 20	+ 5	- 1	- 11	- 13	- 15	- 13	- 12
-80	+ 24	+ 17	+ 12	+ 7	+ 4	+ 3	+ 2	+ 4	+ 6

[a] North latitudes positive, south latitudes negative

Table 24--Concluded

Values of secular change in vertical intensity (Z) of magnetic field for 1912.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 43	- 44	- 45	- 46	- 47	- 48	- 48	- 49	- 49
+70	- 45	- 53	- 62	- 59	- 57	- 55	- 57	- 59	- 63
+60	- 51	- 68	- 83	- 69	- 59	- 59	- 66	- 76	- 84
+50	- 57	- 79	- 99	- 63	- 56	- 55	- 69	- 92	- 95
+40	- 57	- 82	-100	- 57	- 45	- 39	- 46	- 69	- 57
+30	- 52	- 76	- 92	- 44	- 37	- 28	- 24	- 47	- 31
+20	- 47	- 71	- 82	- 28	- 32	- 22	- 5	+ 7	+ 21
+10	- 49	- 69	- 60	- 18	- 23	- 21	- 2	+ 20	+ 54
0	- 55	- 64	- 43	- 11	- 13	- 17	- 4	+ 21	+ 56
-10	- 54	- 54	- 27	+ 3	+ 2	- 3	- 3	+ 13	+ 38
-20	- 42	- 36	- 13	+ 22	+ 27	+ 22	+ 17	+ 12	+ 18
-30	- 19	- 10	+ 9	+ 44	+ 55	+ 54	+ 48	+ 40	+ 32
-40	- 1	+ 16	+ 38	+ 60	+ 76	+ 84	+ 83	+ 73	+ 63
-50	+ 9	+ 26	+ 44	+ 64	+ 83	+101	+111	+111	+109
-60	+ 6	+ 23	+ 38	+ 55	+ 76	+ 96	+113	+124	+134
-70	- 1	+ 15	+ 27	+ 42	+ 57	+ 74	+ 94	+108	+119
-80	+ 9	+ 17	+ 26	+ 36	+ 48	+ 57	+ 65	+ 74	+ 80

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 50	- 49	- 49	- 48	- 47	- 46	- 44	- 43	- 42
+70	- 67	- 68	- 67	- 64	- 58	- 51	- 46	- 43	- 37
+60	- 90	- 97	- 95	- 89	- 77	- 67	- 55	- 46	- 37
+50	- 95	-110	-123	-114	-102	- 87	- 73	- 63	- 51
+40	- 68	- 86	- 99	- 93	- 97	-104	- 93	- 76	- 58
+30	- 22	- 30	- 25	- 40	- 70	-104	-120	-106	- 80
+20	+ 53	+ 70	+ 71	+ 35	- 18	- 95	-129	-135	-118
+10	+104	+125	+117	+ 88	+ 10	- 90	-127	-145	-142
0	+109	+138	+134	+ 98	0	- 86	-125	-147	-152
-10	+ 76	+108	+105	+ 54	- 31	- 82	-125	-145	-148
-20	+ 40	+ 77	+ 86	+ 1	- 37	- 60	-121	-136	-132
-30	+ 33	+ 90	+110	- 4	- 14	- 38	- 97	-111	-106
-40	+ 65	+118	+111	+ 15	+ 3	- 12	- 44	- 59	- 56
-50	+108	+133	+113	+ 65	+ 42	+ 30	+ 23	+ 17	+ 16
-60	+137	+147	+143	+120	+ 98	+ 88	+ 84	+ 78	+ 72
-70	+126	+130	+131	+129	+124	+117	+110	+103	+ 96
-80	+ 87	+ 91	+ 93	+ 95	+ 95	+ 93	+ 91	+ 87	+ 84

[a] North latitudes positive, south latitudes negative

Table 25

Values of secular change in vertical intensity (Z) of magnetic field for 1922.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 40	- 36	- 34	- 34	- 35	- 36	- 37	- 39	- 43
+70	- 14	- 3	- 3	- 13	- 12	- 12	- 18	- 23	- 27
+60	- 1	+ 4	+ 7	+ 2	+ 22	+ 21	+ 15	+ 5	- 6
+50	- 16	+ 13	+ 38	+ 55	+ 61	+ 57	+ 50	+ 42	+ 30
+40	- 33	- 4	+ 22	+ 44	+ 71	+ 92	+ 91	+ 85	+ 71
+30	- 48	- 9	+ 22	+ 49	+ 75	+ 98	+113	+ 99	+ 80
+20	- 68	- 30	0	+ 27	+ 62	+ 85	+ 94	+ 85	+ 61
+10	- 93	- 53	- 34	+ 4	+ 41	+ 68	+ 67	+ 47	+ 20
0	-111	- 72	- 46	- 16	+ 30	+ 55	+ 38	+ 13	- 12
-10	-112	- 84	- 54	- 11	+ 44	+ 59	+ 35	+ 3	- 32
-20	- 96	- 71	- 31	+ 29	+ 66	+ 85	+ 65	+ 18	- 24
-30	- 61	- 24	+ 29	+ 74	+105	+122	+108	+ 59	+ 13
-40	- 8	+ 32	+ 76	+117	+142	+155	+143	+ 98	+ 57
-50	+ 47	+ 78	+107	+133	+156	+155	+148	+113	+ 84
-60	+ 90	+103	+114	+127	+135	+133	+121	+102	+ 81
-70	+107	+106	+102	+102	+101	+ 95	+ 83	+ 68	+ 55
-80	+ 96	+ 91	+ 85	+ 78	+ 72	+ 65	+ 58	+ 52	+ 44

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 44	- 44	- 44	- 44	- 44	- 45	- 48	- 52	- 54
+70	- 32	- 33	- 33	- 34	- 18	- 28	- 25	- 32	- 39
+60	- 16	- 22	- 23	- 11	+ 12	+ 14	0	- 13	- 24
+50	+ 17	0	- 11	- 5	+ 14	+ 19	- 1	- 15	- 25
+40	+ 51	+ 29	+ 8	- 3	- 1	- 13	- 18	- 26	- 35
+30	+ 52	+ 20	+ 1	+ 1	- 6	- 16	- 23	- 29	- 37
+20	+ 31	- 1	- 11	- 9	- 6	- 14	- 23	- 29	- 37
+10	- 4	- 21	- 27	- 18	- 13	- 18	- 26	- 34	- 42
0	- 37	- 54	- 43	- 27	- 18	- 18	- 27	- 35	- 43
-10	- 63	- 79	- 48	- 33	- 22	- 15	- 22	- 32	- 37
-20	- 55	- 64	- 48	- 31	- 18	- 8	- 16	- 26	- 29
-30	- 20	- 37	- 37	- 24	- 11	- 5	- 11	- 21	- 22
-40	+ 27	+ 5	- 9	- 8	- 1	+ 2	- 4	- 12	- 12
-50	+ 57	+ 34	+ 21	+ 15	+ 11	+ 2	- 5	- 7	+ 1
-60	+ 57	+ 36	+ 22	+ 11	- 2	- 13	- 21	- 10	+ 5
-70	+ 42	+ 29	+ 17	+ 5	- 8	- 13	- 5	+ 5	+ 16
-80	+ 38	+ 33	+ 27	+ 24	+ 23	+ 23	+ 25	+ 28	+ 35

[a] North latitudes positive, south latitudes negative

Table 25--Concluded

Values of secular change in vertical intensity (Z) of magnetic field for 1922.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 57	- 59	- 62	- 62	- 63	- 65	- 65	- 65	- 65
+70	- 48	- 53	- 53	- 52	- 56	- 64	- 73	- 76	- 78
+60	- 33	- 38	- 42	- 38	- 47	- 58	- 71	- 77	- 86
+50	- 34	- 42	- 45	- 45	- 45	- 53	- 64	- 76	- 88
+40	- 44	- 52	- 52	- 53	- 46	- 43	- 51	- 68	- 85
+30	- 44	- 41	- 35	- 37	- 33	- 32	- 38	- 45	- 38
+20	- 43	- 31	- 21	- 22	- 22	- 19	- 20	- 16	+ 9
+10	- 42	- 23	- 12	- 12	- 12	- 7	- 2	+ 7	+ 23
0	- 38	- 16	- 5	- 3	- 2	+ 7	+ 9	+ 22	+ 38
-10	- 31	- 10	+ 2	+ 7	+ 9	+ 16	+ 21	+ 26	+ 42
-20	- 21	- 4	+ 8	+ 17	+ 25	+ 35	+ 39	+ 38	+ 39
-30	- 10	+ 6	+ 18	+ 31	+ 45	+ 57	+ 61	+ 56	+ 53
-40	- 1	+ 15	+ 30	+ 46	+ 63	+ 78	+ 88	+ 87	+ 84
-50	+ 12	+ 27	+ 44	+ 62	+ 80	+ 99	+117	+128	+128
-60	+ 22	+ 38	+ 55	+ 73	+ 92	+113	+134	+152	+162
-70	+ 27	+ 41	+ 57	+ 75	+ 95	+113	+128	+141	+151
-80	+ 42	+ 52	+ 62	+ 71	+ 82	+ 92	+100	+109	+115

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 63	- 62	- 59	- 57	- 55	- 53	- 49	- 46	- 43
+70	- 81	- 79	- 75	- 66	- 57	- 49	- 44	- 36	- 27
+60	- 92	- 96	- 96	- 91	- 81	- 70	- 58	- 12	- 19
+50	- 97	-107	-115	-112	-104	- 90	- 75	- 56	- 34
+40	- 92	- 98	-112	-123	-123	-107	- 84	- 56	- 32
+30	- 35	- 35	- 43	- 69	- 96	-113	-118	- 97	- 78
+20	+ 28	+ 40	+ 21	- 15	- 58	-105	-130	-130	-106
+10	+ 51	+ 91	+ 90	+ 38	- 25	- 99	-128	-147	-133
0	+ 72	+ 96	+ 96	+ 40	- 21	- 97	-125	-142	-140
-10	+ 69	+ 82	+ 72	+ 7	- 49	- 94	-120	-134	-132
-20	+ 54	+ 64	+ 43	- 7	- 53	- 86	-113	-118	-113
-30	+ 57	+ 71	+ 58	- 2	- 38	- 65	- 88	- 89	- 80
-40	+ 87	+100	+ 80	+ 20	- 3	- 22	- 37	- 37	- 29
-50	+128	+126	+103	+ 80	+ 60	+ 42	+ 32	+ 32	+ 35
-60	+161	+155	+145	+135	+125	+110	+ 96	+ 85	+ 83
-70	+157	+158	+155	+151	+142	+132	+124	+119	+111
-80	+119	+122	+122	+121	+118	+115	+111	+105	+102

[a] North latitudes positive, south latitudes negative

Table 26

Values of secular change in vertical intensity (Z) of magnetic field for 1932.5, expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 31	- 26	- 23	- 18	- 17	- 15	- 13	- 13	- 13
+70	- 18	- 8	- 1	+ 7	+ 11	+ 12	+ 13	+ 13	+ 13
+60	- 1	+ 28	+ 42	+ 44	+ 40	+ 43	+ 42	+ 39	+ 36
+50	+ 10	+ 40	+ 56	+ 67	+ 75	+ 78	+ 76	+ 68	+ 57
+40	0	+ 21	+ 36	+ 54	+ 81	+103	+113	+102	+ 74
+30	- 35	- 6	+ 28	+ 63	+ 85	+ 94	+ 86	+ 69	+ 46
+20	- 67	- 32	0	+ 30	+ 60	+ 72	+ 61	+ 38	+ 22
+10	- 90	- 60	- 25	+ 4	+ 32	+ 45	+ 29	+ 13	- 2
0	- 96	- 76	- 51	- 18	+ 10	+ 22	+ 9	- 6	- 39
-10	- 86	- 72	- 56	- 25	+ 5	+ 6	- 5	- 26	- 62
-20	- 60	- 48	- 18	+ 33	+ 45	+ 30	0	- 25	- 55
-30	- 14	+ 13	+ 60	+ 92	+104	+ 93	+ 57	+ 19	- 16
-40	+ 28	+ 59	+ 94	+123	+138	+126	+103	+ 69	+ 32
-50	+ 65	+ 88	+112	+132	+141	+131	+114	+ 93	+ 62
-60	+ 94	+106	+117	+120	+115	+106	+ 95	+ 73	+ 47
-70	+105	+104	+102	+ 96	+ 87	+ 76	+ 64	+ 48	+ 32
-80	+ 93	+ 87	+ 81	+ 74	+ 65	+ 57	+ 47	+ 40	+ 32

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 13	- 15	- 16	- 18	- 22	- 24	- 27	- 32	- 34
+70	+ 13	+ 9	+ 5	0	- 5	- 11	- 14	- 17	- 21
+60	+ 32	+ 25	+ 18	+ 12	+ 4	- 3	- 9	- 17	- 23
+50	+ 45	+ 33	+ 24	+ 21	+ 12	- 3	- 15	- 22	- 26
+40	+ 47	+ 32	+ 17	+ 19	+ 32	+ 10	- 3	- 10	- 18
+30	+ 32	+ 16	+ 1	+ 11	+ 22	+ 12	+ 1	- 10	- 20
+20	+ 8	- 7	- 11	+ 3	+ 12	+ 1	- 9	- 18	- 27
+10	- 18	- 27	- 18	- 6	- 1	- 8	- 16	- 24	- 33
0	- 58	- 42	- 26	- 16	- 12	- 13	- 22	- 27	- 36
-10	- 94	- 68	- 36	- 25	- 20	- 15	- 19	- 25	- 32
-20	- 86	- 92	- 55	- 31	- 19	- 12	- 11	- 18	- 24
-30	- 50	- 72	- 61	- 32	- 15	- 4	+ 1	- 6	- 12
-40	- 5	- 25	- 28	- 17	- 6	+ 3	+ 13	+ 8	+ 2
-50	+ 22	+ 5	- 3	- 6	- 9	- 7	- 4	- 3	- 3
-60	+ 20	+ 6	- 7	- 18	- 28	- 33	- 33	- 22	- 7
-70	+ 14	- 2	- 14	- 24	- 31	- 29	- 23	- 13	- 2
-80	+ 24	+ 17	+ 10	+ 7	+ 5	+ 7	+ 10	+ 16	+ 24

[a] North latitudes positive, south latitudes negative

Table 26--Concluded

Values of secular change in vertical intensity (Z) of magnetic field for 1932.5, expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 37	- 41	- 44	- 46	- 48	- 52	- 54	- 55	- 56
+70	- 24	- 26	- 28	- 32	- 35	- 42	- 48	- 56	- 64
+60	- 27	- 33	- 33	- 32	- 35	- 42	- 49	- 57	- 72
+50	- 32	- 41	- 47	- 45	- 45	- 47	- 54	- 65	- 80
+40	- 28	- 42	- 54	- 41	- 37	- 41	- 48	- 54	- 69
+30	- 32	- 47	- 59	- 38	- 32	- 35	- 41	- 30	- 33
+20	- 37	- 54	- 60	- 36	- 24	- 27	- 28	- 6	+ 15
+10	- 44	- 61	- 52	- 27	- 16	- 16	- 14	0	+ 38
0	- 47	- 53	- 42	- 18	- 7	- 3	+ 2	+ 18	+ 47
-10	- 42	- 43	- 28	- 8	+ 5	+ 13	+ 16	+ 18	+ 41
-20	- 28	- 26	- 9	+ 10	+ 25	+ 33	+ 33	+ 28	+ 32
-30	- 12	- 3	+ 15	+ 34	+ 50	+ 58	+ 58	+ 53	+ 46
-40	+ 7	+ 18	+ 35	+ 58	+ 77	+ 90	+ 94	+ 88	+ 79
-50	+ 17	+ 29	+ 49	+ 74	+ 99	+120	+130	+127	+122
-60	+ 11	+ 33	+ 56	+ 81	+106	+129	+146	+155	+160
-70	+ 13	+ 31	+ 52	+ 74	+ 98	+118	+133	+144	+154
-80	+ 33	+ 41	+ 52	+ 66	+ 78	+ 91	+101	+108	+116

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 57	- 57	- 57	- 56	- 54	- 51	- 46	- 42	- 36
+70	- 73	- 83	- 86	- 78	- 67	- 58	- 48	- 39	- 28
+60	- 84	- 97	-102	- 85	- 71	- 61	- 48	- 36	- 20
+50	- 95	-107	-105	- 89	- 76	- 64	- 53	- 37	- 16
+40	- 78	- 78	- 77	- 83	- 84	- 78	- 68	- 52	- 27
+30	- 43	- 39	- 39	- 61	- 81	- 97	- 101	- 87	- 64
+20	+ 12	+ 16	+ 18	- 14	- 68	- 98	-121	-112	- 94
+10	+ 27	+ 48	+ 47	+ 2	- 58	- 95	-126	-128	-110
0	+ 70	+ 72	+ 54	+ 11	- 50	- 92	-122	-126	-114
-10	+ 63	+ 69	+ 44	0	- 53	- 86	-104	-108	-101
-20	+ 44	+ 48	+ 26	- 19	- 53	- 72	- 83	- 83	- 73
-30	+ 42	+ 44	+ 22	- 16	- 36	- 48	- 55	- 48	- 32
-40	+ 72	+ 73	+ 51	+ 20	+ 1	- 12	- 5	- 5	+ 10
-50	+121	+120	+104	+ 76	+ 56	+ 43	+ 39	+ 42	+ 49
-60	+160	+151	+138	+126	+112	+101	+ 92	+ 87	+ 87
-70	+160	+163	+157	+147	+139	+131	+121	+114	+108
-80	+121	+123	+123	+122	+119	+115	+111	+104	+ 98

[a] North latitudes positive, south latitudes negative

Table 27

Values of secular change in vertical intensity (Z) of magnetic field for 1942.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 19	+ 19	+ 18	+ 15	+ 14	+ 17	+ 24	+ 31	+ 41
+70	+ 27	+ 42	+ 52	+ 39	+ 22	+ 13	+ 32	+ 52	+ 59
+60	+ 19	+ 29	+ 43	+ 69	+ 48	+ 39	+ 56	+ 68	+ 73
+50	+ 26	+ 33	+ 68	+ 83	+ 73	+ 76	+ 87	+ 89	+ 82
+40	+ 13	+ 32	+ 59	+ 82	+ 98	+104	+102	+ 87	+ 73
+30	- 17	+ 16	+ 47	+ 92	+106	+ 99	+ 85	+ 70	+ 46
+20	- 41	- 5	+ 16	+ 39	+ 65	+ 65	+ 49	+ 10	- 12
+10	- 62	- 35	- 15	+ 5	+ 27	+ 29	+ 5	- 30	- 60
0	- 68	- 51	- 33	- 13	+ 6	+ 3	- 25	- 60	- 91
-10	- 56	- 48	- 28	- 8	- 5	- 23	- 55	- 89	-118
-20	- 32	- 23	- 4	+ 23	+ 11	- 21	- 63	- 91	-113
-30	+ 2	+ 19	+ 59	+ 76	+ 53	+ 31	- 5	- 49	- 76
-40	+ 47	+ 80	+117	+115	+ 93	+ 75	+ 51	+ 9	- 33
-50	+ 74	+ 95	+115	+115	+104	+ 91	+ 73	+ 45	+ 6
-60	+ 79	+ 89	+ 93	+ 89	+ 78	+ 64	+ 47	+ 27	+ 3
-70	+ 66	+ 64	+ 59	+ 51	+ 41	+ 30	+ 19	+ 5	- 10
-80	+ 46	+ 39	+ 32	+ 24	+ 16	+ 8	+ 2	- 3	- 9

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+ 38	+ 34	+ 31	+ 26	+ 21	+ 14	+ 8	+ 3	- 3
+70	+ 58	+ 52	+ 46	+ 39	+ 34	+ 26	+ 17	+ 5	- 10
+60	+ 67	+ 61	+ 53	+ 46	+ 38	+ 30	+ 19	+ 7	- 8
+50	+ 71	+ 63	+ 53	+ 45	+ 37	+ 26	+ 15	+ 4	- 5
+40	+ 59	+ 45	+ 36	+ 33	+ 31	+ 18	+ 7	- 4	- 14
+30	+ 28	+ 21	+ 17	+ 17	+ 20	+ 11	- 2	- 12	- 23
+20	- 8	- 1	+ 3	+ 4	+ 7	+ 2	- 8	- 18	- 28
+10	- 45	- 20	- 11	- 6	- 3	- 5	- 14	- 23	- 32
0	- 84	- 45	- 24	- 16	- 11	- 10	- 18	- 27	- 34
-10	-113	- 73	- 37	- 25	- 18	- 16	- 18	- 24	- 29
-20	-132	- 90	- 55	- 35	- 25	- 16	- 9	- 14	- 20
-30	- 93	- 87	- 62	- 41	- 27	- 16	- 2	+ 2	- 4
-40	- 56	- 63	- 55	- 41	- 28	- 18	- 6	+ 7	+ 8
-50	- 27	- 42	- 45	- 40	- 34	- 27	- 21	- 14	- 3
-60	- 23	- 42	- 53	- 52	- 44	- 36	- 26	- 15	+ 2
-70	- 24	- 39	- 49	- 47	- 41	- 33	- 23	- 10	+ 4
-80	- 14	- 18	- 20	- 20	- 17	- 13	- 7	+ 1	+ 9

[a] North latitudes positive, south latitudes negative

Table 27--Concluded

Values of secular change in vertical intensity (Z) of magnetic field for 1942.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 7	- 7	- 2	+ 3	+ 3	- 1	- 5	- 8	- 8
+70	- 25	- 35	- 9	+ 3	+ 2	- 6	- 14	- 21	- 23
+60	- 23	- 41	- 29	- 18	- 8	0	+ 4	- 2	- 7
+50	- 13	- 15	- 16	- 19	- 23	- 25	- 23	- 20	- 18
+40	- 22	- 17	- 12	- 14	- 18	- 25	- 33	- 39	- 41
+30	- 31	- 18	- 7	- 7	- 13	- 21	- 30	- 39	- 43
+20	- 33	- 19	- 5	+ 2	- 4	- 13	- 24	- 33	- 33
+10	- 33	- 21	- 5	+ 7	+ 5	- 2	- 11	- 11	+ 1
0	- 33	- 22	- 7	+ 8	+ 15	+ 10	+ 5	+ 15	+ 38
-10	- 27	- 19	- 6	+ 11	+ 24	+ 22	+ 18	+ 31	+ 54
-20	- 20	- 13	- 1	+ 19	+ 36	+ 39	+ 35	+ 36	+ 47
-30	- 6	0	+ 16	+ 38	+ 55	+ 63	+ 61	+ 57	+ 57
-40	+ 11	+ 23	+ 44	+ 64	+ 82	+ 95	+ 99	+ 98	+ 90
-50	+ 17	+ 39	+ 63	+ 88	+109	+125	+135	+137	+132
-60	+ 23	+ 46	+ 69	+ 94	+115	+134	+150	+162	+162
-70	+ 22	+ 42	+ 61	+ 81	+ 99	+115	+128	+138	+142
-80	+ 19	+ 30	+ 41	+ 52	+ 63	+ 72	+ 78	+ 84	+ 87

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 7	- 6	- 4	- 3	+ 2	+ 6	+ 9	+ 13	+ 17
+70	- 19	- 15	- 11	- 7	- 4	- 2	+ 3	+ 8	+ 16
+60	- 10	- 12	- 13	- 16	- 18	- 18	- 9	+ 2	+ 11
+50	- 16	- 13	- 8	- 17	- 35	- 41	- 22	- 8	+ 5
+40	- 32	- 18	- 18	- 36	- 56	- 58	- 25	+ 7	+ 18
+30	- 32	- 21	- 35	- 54	- 70	- 76	- 57	- 38	- 36
+20	- 18	- 24	- 45	- 57	- 72	- 88	- 87	- 78	- 68
+10	+ 14	+ 8	- 10	- 30	- 69	- 98	-106	- 96	- 81
0	+ 42	+ 20	- 8	- 41	- 76	-108	-111	- 96	- 82
-10	+ 40	+ 8	- 22	- 54	- 81	-103	- 98	- 82	- 66
-20	+ 34	+ 5	- 21	- 50	- 70	- 82	- 75	- 58	- 42
-30	+ 42	+ 19	- 5	- 25	- 42	- 51	- 47	- 29	- 13
-40	+ 75	+ 51	+ 30	+ 13	0	- 8	- 8	+ 4	+ 26
-50	+121	+105	+ 82	+ 65	+ 53	+ 43	+ 40	+ 46	+ 58
-60	+151	+137	+124	+108	+ 96	+ 87	+ 78	+ 74	+ 74
-70	+139	+132	+123	+114	+105	+ 95	+ 86	+ 78	+ 72
-80	+ 88	+ 87	+ 84	+ 81	+ 76	+ 71	+ 64	+ 57	+ 52

[a] North latitudes positive, south latitudes negative

Table 28

Values of secular change in north component (X) of magnetic field intensity for 1912.5, expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 2	- 8	- 13	- 17	- 21	- 24	- 26	- 28	- 29
+70	- 3	- 10	- 18	- 27	- 32	- 36	- 38	- 39	- 40
+60	- 1	- 12	- 27	- 40	- 49	- 54	- 60	- 61	- 57
+50	+ 10	- 2	- 19	- 36	- 49	- 62	- 71	- 77	- 71
+40	+ 25	+ 12	- 2	- 17	- 32	- 47	- 61	- 61	- 48
+30	+ 36	+ 29	+ 16	+ 2	- 13	- 26	- 34	- 28	- 17
+20	+ 33	+ 31	+ 26	+ 16	+ 3	- 10	- 11	- 1	+ 15
+10	+ 15	+ 14	+ 14	+ 10	+ 2	- 7	- 4	+ 10	+ 28
0	- 7	- 4	- 3	- 5	- 13	- 18	- 10	+ 3	+ 16
-10	- 24	- 21	- 23	- 24	- 29	- 26	- 16	- 8	+ 1
-20	- 44	- 39	- 45	- 46	- 40	- 31	- 24	- 22	- 21
-30	- 71	- 72	- 75	- 73	- 57	- 36	- 30	- 42	- 54
-40	-115	-107	- 83	- 60	- 33	- 15	- 19	- 35	- 51
-50	- 92	- 75	- 53	- 32	- 8	+ 9	+ 13	+ 6	- 5
-60	- 55	- 40	- 19	0	+ 21	+ 42	+ 52	+ 51	+ 42
-70	- 18	- 3	+ 11	+ 27	+ 43	+ 56	+ 58	+ 52	+ 38
-80	+ 13	+ 10	+ 8	+ 7	+ 5	+ 2	- 4	- 13	- 22

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 29	- 28	- 27	- 25	- 23	- 20	- 17	- 12	- 8
+70	- 39	- 38	- 37	- 34	- 31	- 28	- 24	- 21	- 16
+60	- 52	- 48	- 42	- 40	- 35	- 30	- 25	- 20	- 14
+50	- 59	- 46	- 40	- 31	- 24	- 17	- 11	- 9	- 8
+40	- 32	- 24	- 13	- 8	- 8	- 8	- 9	- 9	- 9
+30	- 3	+ 7	+ 9	+ 8	+ 7	+ 6	+ 6	+ 3	+ 1
+20	+ 31	+ 34	+ 22	+ 15	+ 12	+ 10	+ 11	+ 12	+ 9
+10	+ 37	+ 29	+ 19	+ 10	+ 4	+ 1	+ 1	+ 5	+ 6
0	+ 22	+ 18	+ 10	+ 1	- 7	- 9	- 7	- 5	- 5
-10	+ 5	+ 4	- 5	- 13	- 18	- 16	- 15	- 17	- 20
-20	- 20	- 19	- 26	- 31	- 29	- 26	- 27	- 32	- 38
-30	- 63	- 64	- 61	- 48	- 36	- 31	- 33	- 35	- 40
-40	- 62	- 66	- 54	- 38	- 25	- 19	- 22	- 23	- 23
-50	- 17	- 26	- 22	- 13	- 5	- 10	- 19	- 25	- 28
-60	+ 31	+ 22	+ 16	+ 8	- 6	- 19	- 29	- 37	- 44
-70	+ 23	+ 11	- 3	- 17	- 29	- 38	- 43	- 48	- 52
-80	- 31	- 40	- 48	- 57	- 63	- 61	- 52	- 41	- 31

[a] North latitudes positive, south latitudes negative

Table 28--Concluded

Values of secular change in north component (X) of magnetic field intensity for 1912.5, expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 4	- 1	+ 3	+ 7	+ 9	+ 12	+ 15	+ 17	+ 19
+70	- 13	- 8	- 4	- 1	+ 3	+ 7	+ 9	+ 13	+ 17
+60	- 10	- 7	- 3	+ 1	+ 4	+ 6	+ 9	+ 10	+ 13
+50	- 8	- 10	- 11	- 12	- 12	- 12	- 12	- 12	- 12
+40	- 11	- 14	- 18	- 22	- 27	- 31	- 34	- 39	- 46
+30	- 4	- 12	- 20	- 26	- 31	- 38	- 46	- 57	- 75
+20	0	- 11	- 20	- 27	- 29	- 32	- 40	- 53	- 66
+10	- 2	- 12	- 21	- 28	- 23	- 19	- 18	- 28	- 41
0	- 10	- 19	- 27	- 31	- 31	- 26	- 16	- 6	- 1
-10	- 25	- 33	- 40	- 43	- 45	- 44	- 35	- 19	0
-20	- 44	- 48	- 52	- 55	- 57	- 57	- 55	- 39	- 21
-30	- 42	- 44	- 45	- 45	- 45	- 42	- 40	- 38	- 33
-40	- 24	- 26	- 28	- 27	- 25	- 22	- 21	- 21	- 25
-50	- 29	- 22	- 12	- 5	- 2	- 2	- 4	- 9	- 14
-60	- 40	- 31	- 18	- 7	+ 1	+ 4	+ 3	0	- 5
-70	- 44	- 35	- 24	- 14	- 3	+ 8	+ 14	+ 14	+ 11
-80	- 22	- 14	- 8	- 2	+ 3	+ 9	+ 16	+ 21	+ 30

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 22	+ 24	+ 24	+ 23	+ 21	+ 17	+ 13	+ 8	+ 3
+70	+ 22	+ 27	+ 31	+ 33	+ 31	+ 23	+ 17	+ 11	+ 4
+60	+ 19	+ 26	+ 33	+ 34	+ 35	+ 32	+ 22	+ 15	+ 8
+50	- 12	- 12	- 7	+ 4	+ 18	+ 24	+ 27	+ 25	+ 20
+40	- 57	- 66	- 65	- 47	- 21	+ 7	+ 29	+ 39	+ 32
+30	- 98	-116	-112	- 90	- 61	- 22	+ 12	+ 39	+ 45
+20	- 85	-105	-120	-104	- 68	- 31	0	+ 24	+ 32
+10	- 54	- 64	- 67	- 60	- 38	- 19	- 11	- 1	+ 10
0	+ 5	+ 7	+ 6	0	- 4	- 11	- 23	- 23	- 14
-10	+ 14	+ 30	+ 35	+ 26	+ 6	- 16	- 30	- 37	- 33
-20	- 6	+ 4	+ 10	+ 1	- 17	- 34	- 45	- 51	- 56
-30	- 23	- 15	- 16	- 25	- 42	- 53	- 63	- 67	- 69
-40	- 34	- 39	- 44	- 54	- 69	- 83	- 98	-109	-116
-50	- 22	- 29	- 41	- 58	- 80	-100	-112	-113	-105
-60	- 13	- 20	- 28	- 37	- 49	- 63	- 73	- 72	- 67
-70	+ 8	+ 5	+ 1	- 3	- 9	- 17	- 23	- 27	- 26
-80	+ 37	+ 40	+ 38	+ 36	+ 32	+ 28	+ 25	+ 22	+ 18

[a] North latitudes positive, south latitudes negative

Table 29

Values of secular change in north component (X) of magnetic field intensity for 1922.5, expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 12	-16	-19	-23	-28	-32	-34	-35	-33
+70	- 7	-16	-24	-31	-36	-39	-39	-39	-40
+60	+ 2	-12	-26	-39	-50	-57	-60	-60	-60
+50	+ 9	- 3	-19	-33	-45	-57	-62	-66	-57
+40	+ 21	+11	- 3	-16	-30	-40	-44	-42	-34
+30	+ 33	+23	+14	+ 3	- 9	-16	-18	-16	-10
+20	+ 30	+28	+21	+ 8	+ 5	+ 3	+ 6	+11	+16
+10	+ 11	+12	+12	+ 9	+ 6	+12	+20	+31	+38
0	- 7	- 7	- 7	- 9	-11	- 7	+ 5	+15	+26
-10	- 28	-26	-29	-33	-36	-32	-21	- 8	+ 2
-20	- 52	-53	-59	-62	-60	-56	-48	-37	-29
-30	- 77	-83	-90	-87	-75	-66	-65	-66	-66
-40	-104	-97	-78	-64	-54	-46	-47	-53	-60
-50	- 82	-67	-52	-32	-14	- 6	-10	-20	-30
-60	- 48	-33	-15	+ 5	+25	+35	+31	+21	+ 9
-70	- 23	-12	+ 1	+14	+29	+36	+33	+27	+16
-80	+ 13	+10	+ 9	+ 8	+ 5	+ 2	- 5	-14	-22

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-32	-31	-27	-24	-21	-18	-13	- 9	- 3
+70	-40	-39	-38	-37	-35	-32	-30	-24	-19
+60	-56	-50	-43	-39	-35	-32	-28	-24	-21
+50	-45	-36	-33	-29	-27	-23	-19	-14	-14
+40	-25	-20	-17	-14	-12	- 9	- 8	- 8	-12
+30	- 4	+ 1	+ 1	+ 1	+ 1	+ 1	0	- 5	-10
+20	+18	+17	+15	+12	+ 8	+ 3	- 1	- 7	-12
+10	+35	+28	+22	+13	+ 6	+ 3	- 1	- 8	-14
0	+26	+22	+14	+ 6	- 2	- 8	-11	-12	-14
-10	+11	+ 9	+ 4	- 4	- 9	-14	-16	-15	-16
-20	-22	-19	-17	-15	-17	-18	-19	-18	-21
-30	-61	-48	-40	-34	-29	-27	-25	-24	-29
-40	-62	-55	-49	-41	-30	-25	-23	-22	-31
-50	-30	-29	-26	-21	-15	-14	-18	-25	-29
-60	+ 2	- 1	- 2	- 7	-15	-22	-29	-34	-37
-70	+ 3	- 9	-19	-28	-34	-38	-43	-45	-45
-80	-31	-40	-48	-54	-57	-58	-57	-52	-44

[a] North latitudes positive, south latitudes negative

Table 29--Concluded

Values of secular change in north component (X) of magnetic field intensity for 1922.5, expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+ 2	+ 8	+13	+18	+21	+23	+24	+26	+27
+70	-13	- 8	- 2	+ 4	+ 6	+ 8	+11	+14	+18
+60	-15	-10	- 6	- 7	- 8	- 5	+ 1	+ 5	+ 8
+50	-14	-15	-16	-19	-20	-20	-18	-17	-16
+40	-16	-20	-24	-28	-29	-32	-32	-36	-43
+30	-17	-24	-28	-34	-39	-42	-45	-51	-59
+20	-20	-27	-33	-36	-41	-44	-46	-49	-51
+10	-22	-28	-33	-36	-39	-41	-42	-42	-44
0	-20	-25	-29	-32	-33	-34	-35	-35	-34
-10	-20	-24	-28	-30	-33	-37	-36	-33	-28
-20	-24	-28	-31	-33	-34	-38	-39	-39	-37
-30	-33	-38	-40	-41	-41	-40	-39	-42	-44
-40	-36	-42	-43	-40	-35	-34	-35	-40	-46
-50	-30	-29	-28	-24	-22	-22	-26	-32	-37
-60	-34	-28	-20	-13	- 7	- 3	- 6	-11	-17
-70	-42	-35	-28	-19	-10	0	+ 8	+12	+12
-80	-35	-27	-18	- 9	0	+ 9	+18	+28	+38

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+29	+28	+26	+23	+ 18	+ 12	+ 7	- 1	- 7
+70	+22	+27	+30	+33	+ 31	+ 26	+ 20	+ 12	+ 3
+60	+10	+17	+25	+28	+ 28	+ 26	+ 23	+ 19	+ 12
+50	-15	-12	- 4	+11	+ 21	+ 23	+ 24	+ 22	+ 18
+40	-50	-52	-46	-29	- 9	+ 12	+ 25	+ 30	+ 27
+30	-68	-77	-73	-62	- 38	- 9	+ 16	+ 34	+ 38
+20	-63	-73	-80	-68	- 47	- 16	+ 9	+ 28	+ 31
+10	-51	-55	-52	-47	- 35	- 15	- 1	+ 8	+ 12
0	-31	-24	-21	-16	- 15	- 17	- 21	- 15	- 9
-10	-24	-18	-11	-12	- 24	- 34	- 38	- 37	- 32
-20	-37	-35	-30	-32	- 40	- 49	- 53	- 54	- 53
-30	-49	-47	-47	-50	- 58	- 66	- 74	- 75	- 75
-40	-51	-55	-66	-77	- 87	- 95	- 98	-100	- 98
-50	-37	-53	-66	-85	-107	-116	-118	-114	- 97
-60	-23	-32	-45	-57	- 69	- 82	- 83	- 74	- 62
-70	+ 8	+ 1	- 7	-13	- 21	- 26	- 29	- 31	- 29
-80	+40	+40	+38	+35	+ 32	+ 29	+ 24	+ 20	+ 18

[a] North latitudes positive, south latitudes negative

Table 30

Values of secular change in north component (X) of magnetic field intensity for 1932.5, expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	-20	-27	-33	-40	-44	-48	-52	-51	-47
+70	-17	-28	-38	-47	-54	-58	-58	-54	-52
+60	- 4	-17	-31	-42	-51	-53	-51	-47	-41
+50	+ 6	- 3	-17	-28	-34	-36	-33	-27	-19
+40	+25	+18	+ 7	- 2	- 9	-11	- 6	+ 2	+ 7
+30	+43	+40	+31	+20	+15	+15	+20	+25	+30
+20	+31	+30	+28	+26	+25	+26	+33	+42	+50
+10	+ 3	+ 4	+ 5	+ 5	+ 9	+15	+25	+40	+53
0	-23	-22	-21	-20	-17	- 7	+ 6	+21	+35
-10	-50	-50	-47	-47	-42	-33	-19	- 6	+ 3
-20	-69	-69	-70	-74	-70	-62	-54	-45	-35
-30	-83	-85	-89	-83	-68	-58	-61	-65	-68
-40	-79	-72	-65	-55	-44	-37	-42	-50	-57
-50	-57	-48	-38	-25	-12	- 5	-12	-18	-23
-60	-35	-23	- 8	+ 7	+19	+28	+24	+15	+ 3
-70	-10	+ 2	+14	+23	+28	+25	+15	+ 3	- 8
-80	+34	+33	+31	+28	+17	+ 2	-14	-27	-39

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-43	-38	-34	-30	-26	-22	-17	-11	- 5
+70	-48	-42	-38	-34	-30	-25	-20	-14	- 9
+60	-36	-29	-24	-21	-19	-18	-18	-19	-15
+50	-13	- 8	- 4	- 5	- 6	- 7	- 8	- 8	- 7
+40	+12	+15	+11	+ 6	+ 4	+ 1	+ 1	+ 2	+ 2
+30	+32	+30	+20	+12	+ 9	+ 8	+ 8	+ 8	+ 8
+20	+46	+34	+23	+18	+17	+15	+14	+14	+10
+10	+44	+33	+23	+15	+10	+ 7	+ 6	+ 4	+ 2
0	+39	+28	+10	-10	-12	-12	-12	-11	-10
-10	+ 9	+ 9	+ 6	- 1	-11	-20	-24	-28	-30
-20	-25	-18	- 5	- 6	-10	-13	-18	-23	-29
-30	-60	-42	-10	+ 4	+ 1	- 5	-12	-19	-26
-40	-59	-45	-23	- 5	+ 2	+ 2	- 3	- 9	-17
-50	-27	-23	-12	+ 2	+ 3	- 3	-11	-17	-22
-60	- 2	- 3	- 5	- 9	-13	-18	-23	-29	-32
-70	-15	-20	-25	-29	-31	-35	-37	-38	-36
-80	-50	-54	-56	-57	-57	-55	-46	-42	-39

[a] North latitudes positive, south latitudes negative

Table 30--Concluded

Values of secular change in north component (X) of magnetic field intensity for 1932.5, expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+ 2	+ 8	+12	+16	+19	+22	+26	+28	+32
+70	- 4	- 1	+ 3	+ 6	+ 9	+13	+17	+22	+25
+60	- 9	- 3	0	+ 2	+ 4	+ 6	+ 9	+10	+11
+50	- 5	- 3	- 2	- 4	- 5	- 7	- 8	- 9	-10
+40	+ 1	0	- 4	- 8	-12	-16	-20	-27	-38
+30	+ 6	0	- 6	-13	-17	-24	-32	-45	-60
+20	+ 4	- 3	- 9	-16	-22	-29	-40	-52	-61
+10	- 2	- 9	-15	-21	-26	-33	-40	-46	-45
0	-12	-17	-21	-27	-31	-36	-39	-40	-34
-10	-33	-31	-33	-37	-39	-41	-41	-37	-29
-20	-38	-46	-51	-50	-50	-53	-51	-43	-33
-30	-34	-42	-48	-53	-55	-57	-55	-50	-47
-40	-21	-28	-37	-43	-49	-54	-58	-61	-64
-50	-26	-27	-28	-29	-31	-34	-41	-48	-52
-60	-33	-29	-21	-14	-13	-14	-19	-24	-32
-70	-31	-23	-17	- 9	0	+ 9	+19	+20	+17
-80	-22	-13	- 5	+ 5	+16	+29	+41	+52	+60

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+35	+35	+32	+28	+22	+16	+ 8	- 2	-11
+70	+28	+31	+33	+32	+28	+22	+16	+ 7	- 3
+60	+13	+17	+21	+28	+31	+28	+23	+17	+ 7
+50	-12	-12	- 8	+ 3	+12	+19	+26	+23	+15
+40	-52	-52	-41	-27	- 9	+ 6	+21	+33	+30
+30	-72	-72	-66	-48	-24	- 2	+15	+32	+46
+20	-64	-64	-58	-47	-24	- 4	+16	+30	+30
+10	-41	-36	-32	-31	-19	- 9	- 1	+ 3	+ 6
0	-28	-19	-12	-15	-22	-26	-26	-20	-21
-10	-21	- 8	- 3	- 8	-24	-41	-47	-47	-49
-20	-25	-15	-11	-19	-37	-51	-63	-69	-70
-30	-44	-41	-41	-49	-59	-66	-75	-82	-82
-40	-65	-65	-68	-74	-82	-85	-87	-88	-85
-50	-58	-66	-73	-83	-92	-94	-87	-76	-67
-60	-39	-46	-53	-61	-68	-68	-63	-56	-46
-70	+ 9	+ 1	- 7	-15	-21	-25	-23	-20	-17
-80	+67	+70	+70	+65	+57	+48	+40	+37	+35

[a] North latitudes positive, south latitudes negative

Table 31

Values of secular change in north component (X) of magnetic field intensity for 1942.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 2	- 8	-12	-17	-22	-25	-29	-31	-32
+70	- 3	-11	-18	-26	-32	-34	-31	-27	-23
+60	+ 7	- 4	-16	-24	-29	-25	-17	-14	-11
+50	+22	+12	+ 3	- 8	-13	-12	- 9	- 4	+ 3
+40	+44	+37	+25	+17	+13	+14	+18	+24	+29
+30	+45	+47	+44	+36	+33	+34	+38	+43	+50
+20	+23	+27	+31	+37	+41	+45	+50	+55	+61
+10	+ 6	+10	+14	+21	+30	+44	+57	+65	+60
0	-11	- 8	- 5	+ 1	+ 8	+28	+46	+51	+52
-10	-25	-25	-27	-26	-20	- 6	+17	+24	+27
-20	-50	-51	-57	-59	-50	-37	-17	-12	- 7
-30	-64	-68	-69	-63	-43	-43	-46	-46	-38
-40	-54	-45	-39	-27	-22	-30	-50	-56	-56
-50	-40	-28	-17	- 7	- 8	-17	-32	-41	-45
-60	-16	- 7	+ 2	+ 9	+14	+11	+ 6	+ 1	- 5
-70	+10	+16	+23	+26	+27	+26	+23	+19	+13
-80	+37	+27	+16	+ 5	- 6	-17	-27	-36	-45

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-31	-28	-25	-22	-20	-17	-14	-11	- 8
+70	-20	-17	-13	-10	- 8	- 7	- 5	- 4	- 3
+60	- 9	- 3	+ 1	+ 4	+ 8	+ 9	+ 9	+10	+11
+50	+11	+18	+20	+22	+16	+ 8	+ 5	+ 5	+ 7
+40	+35	+38	+35	+21	+15	+ 7	+ 5	+ 4	+ 3
+30	+53	+50	+37	+25	+17	+ 9	+ 7	+ 4	+ 2
+20	+56	+47	+35	+22	+13	+ 8	+ 6	+ 4	+ 1
+10	+52	+42	+30	+18	+11	+ 7	+ 4	+ 1	- 2
0	+46	+37	+27	+16	+ 9	+ 6	+ 2	- 3	- 9
-10	+32	+33	+25	+15	+ 8	+ 2	- 2	- 7	-13
-20	+ 3	+16	+25	+15	+ 7	0	- 6	-13	-18
-30	-28	-14	+ 7	+22	+17	+ 7	- 2	-11	-19
-40	-50	-42	-31	-19	- 4	+ 2	- 3	-10	-16
-50	-46	-45	-43	-36	-27	-22	-15	-14	-17
-60	- 9	-14	-18	-22	-27	-29	-25	-23	-18
-70	+ 8	+ 1	- 3	- 8	-12	-16	-18	-16	- 9
-80	-54	-62	-69	-72	-68	-60	-48	-33	-17

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[a] North latitudes positive, south latitudes negative

Table 31--Concluded

Values of secular change in north component (X) of magnetic field intensity for 1942.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 4	- 1	+ 4	+ 8	+12	+17	+21	+24	+28
+70	- 2	- 1	+ 2	+ 4	+ 6	+ 8	+12	+16	+20
+60	+12	+13	+11	+11	+12	+17	+19	+21	+23
+50	+ 7	+ 7	+ 7	+ 6	+ 8	+11	+13	+16	+15
+40	+ 2	+ 1	- 2	- 2	- 1	0	+ 2	+ 4	+ 3
+30	- 3	- 6	- 9	-10	-10	-10	-10	-10	-16
+20	- 4	- 9	-14	-17	-18	-19	-18	-19	-22
+10	- 7	-12	-18	-23	-26	-27	-28	-29	-33
0	-14	-20	-26	-32	-35	-37	-38	-38	-41
-10	-21	-28	-35	-39	-42	-45	-47	-49	-48
-20	-25	-32	-38	-45	-49	-55	-57	-56	-48
-30	-23	-27	-32	-39	-45	-52	-62	-66	-58
-40	-19	-23	-27	-30	-34	-39	-47	-56	-65
-50	-21	-26	-25	-21	-19	-18	-20	-29	-41
-60	-13	-10	- 7	- 4	0	+ 3	+ 4	- 1	-12
-70	- 1	+ 8	+16	+22	+27	+30	+31	+32	+31
-80	0	+17	+34	+50	+65	+76	+86	+93	+97

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+31	+33	+33	+30	+23	+18	+12	+ 7	+ 3
+70	+24	+27	+28	+28	+24	+19	+14	+ 9	+ 3
+60	+24	+25	+29	+34	+38	+37	+32	+25	+16
+50	+13	+14	+17	+28	+35	+42	+44	+39	+30
+40	0	+ 4	+14	+23	+38	+48	+53	+53	+51
+30	-13	-10	- 2	+11	+27	+37	+39	+40	+42
+20	-24	-16	+ 4	+13	+15	+17	+18	+19	+20
+10	-34	-17	0	+ 4	+ 4	+ 4	+ 4	+ 4	+ 5
0	-37	-16	- 6	- 6	- 8	-10	-13	-14	-12
-10	-34	-24	-20	-20	-22	-27	-29	-29	-27
-20	-40	-38	-40	-42	-43	-45	-46	-48	-49
-30	-54	-53	-57	-62	-68	-72	-74	-70	-66
-40	-67	-74	-82	-89	-94	-90	-83	-72	-62
-50	-54	-65	-71	-77	-80	-76	-70	-62	-51
-60	-24	-34	-44	-51	-52	-50	-45	-38	-27
-70	+26	+19	+12	+ 2	- 6	- 5	- 3	+ 1	+ 5
-80	+98	+96	+92	+87	+80	+73	+65	+57	+47

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[a] North latitudes positive, south latitudes negative

Table 32

Values of secular change in east component (Y) of magnetic field intensity for 1912.5, expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+26	+23	+21	+ 17	+12	+ 8	+ 4	+ 1	- 2
+70	+32	+26	+19	+ 16	+12	+ 6	- 1	- 7	-11
+60	+46	+42	+38	+ 31	+22	+12	- 1	-13	-22
+50	+53	+55	+50	+ 42	+32	+16	- 2	-21	-39
+40	+55	+65	+66	+ 58	+43	+20	0	-22	-46
+30	+56	+68	+76	+ 70	+54	+25	+ 1	-20	-41
+20	+59	+71	+77	+ 77	+66	+37	0	-25	-50
+10	+58	+70	+76	+ 85	+80	+51	- 3	-34	-59
0	+50	+65	+74	+ 89	+94	+66	-11	-46	-63
-10	+45	+64	+76	+ 96	+96	+59	-20	-64	-73
-20	+43	+66	+82	+ 97	+86	+45	-38	-79	-86
-30	+50	+75	+95	+102	+78	+32	-32	-78	-90
-40	+62	+83	+93	+ 80	+61	+20	-18	-62	-80
-50	+35	+52	+62	+ 58	+41	+14	-17	-52	-65
-60	+14	+24	+31	+ 29	+17	0	-19	-43	-58
-70	-12	-10	-10	- 13	-20	-28	-38	-48	-50
-80	-51	-51	-52	- 53	-55	-58	-62	-62	-54

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 4	- 6	- 8	-11	-13	-17	-19	-21	-23
+70	-15	-17	-18	-17	-16	-16	-17	-19	-22
+60	-31	-33	-31	-28	-26	-25	-26	-28	-24
+50	-50	-46	-35	-29	-26	-25	-24	-22	-15
+40	-62	-46	-33	-26	-22	-21	-19	-15	- 9
+30	-66	-47	-33	-23	-14	-14	-12	- 8	- 2
+20	-69	-50	-29	-15	- 5	- 5	- 5	- 3	+ 4
+10	-61	-39	-20	- 6	+ 3	- 6	-12	- 4	+ 5
0	-46	-23	- 8	+ 2	+12	- 6	-17	- 7	+ 3
-10	-44	-17	- 1	+10	+10	- 7	-17	- 7	+ 3
-20	-52	-18	+ 2	+13	+ 4	-12	-15	- 5	+ 3
-30	-56	-22	+ 1	+11	- 3	-13	-11	- 3	+ 4
-40	-54	-29	- 9	+ 1	- 9	- 9	- 4	+ 2	+ 7
-50	-57	-40	-28	-19	-13	- 4	0	+ 8	+11
-60	-55	-41	-29	-19	- 9	0	+ 8	+16	+24
-70	-45	-36	-23	- 9	+ 2	+14	+25	+35	+45
-80	-46	-34	-21	- 4	+14	+30	+42	+55	+65

[a] North latitudes positive, south latitudes negative

Table 32--Concluded

Values of secular change in east component (Y) of magnetic field intensity for 1912.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-25	-24	-23	-21	-18	-13	- 9	- 5	- 2
+70	-23	-21	-18	-12	- 9	- 7	- 7	- 8	- 8
+60	-19	-13	- 7	- 1	+ 3	+ 2	- 7	-14	-19
+50	-10	- 4	+ 1	+ 4	+ 6	+ 5	- 2	- 9	-14
+40	- 3	+ 1	+ 6	+ 9	+11	+11	+ 7	+ 1	- 4
+30	+ 4	+ 7	+10	+14	+16	+18	+17	+15	+10
+20	+ 7	+ 9	+12	+17	+22	+26	+29	+29	+27
+10	+10	+11	+13	+15	+22	+29	+35	+40	+43
0	+11	+14	+14	+13	+14	+19	+28	+38	+44
-10	+11	+17	+19	+19	+15	+11	+13	+21	+29
-20	+13	+19	+22	+22	+19	+15	+ 8	+ 6	+ 8
-30	+13	+22	+26	+27	+24	+17	+ 7	- 1	- 7
-40	+15	+26	+34	+34	+27	+16	+ 9	0	-10
-50	+24	+34	+42	+42	+39	+28	+18	+ 7	- 5
-60	+31	+39	+47	+49	+45	+37	+28	+17	+ 4
-70	+52	+57	+59	+58	+54	+48	+38	+28	+17
-80	+72	+78	+83	+75	+68	+61	+53	+44	+33

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 2	+ 6	+ 9	+ 14	+ 19	+ 22	+25	+27	+28
+70	- 7	- 2	+ 4	+ 12	+ 21	+ 28	+34	+38	+37
+60	-18	-13	- 5	+ 8	+ 20	+ 30	+37	+42	+46
+50	-18	-17	-13	- 2	+ 11	+ 21	+29	+38	+47
+40	- 7	-16	-27	- 25	- 8	+ 2	+11	+27	+43
+30	+ 5	- 8	-40	- 57	- 46	- 30	-14	+12	+39
+20	+21	+ 4	-43	- 82	- 77	- 65	-45	- 6	+36
+10	+44	+16	-43	- 97	-109	- 92	-67	-22	+25
0	+44	+16	-50	-101	-123	-102	-66	-24	+17
-10	+25	+ 8	-43	- 92	-109	- 80	-48	-20	+17
-20	+ 4	-10	-49	- 79	- 80	- 57	-34	-13	+17
-30	-13	-26	-53	- 71	- 69	- 46	-25	- 4	+21
-40	-23	-37	-53	- 62	- 60	- 42	-17	+ 7	+35
-50	-19	-31	-43	- 52	- 51	- 40	-19	+ 1	+18
-60	- 8	-18	-29	- 37	- 39	- 33	-22	- 9	+ 2
-70	+ 5	- 7	-17	- 27	- 33	- 34	-29	-23	-17
-80	+23	+12	+ 2	- 8	- 18	- 30	-40	-45	-49

[a] North latitudes positive, south latitudes negative

Table 33

Values of secular change in east component (Y) of magnetic field intensity for 1922.5, expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+31	+27	+22	+16	+10	+ 3	- 3	- 8	-13
+70	+41	+37	+31	+25	+17	+ 6	- 3	-10	-15
+60	+57	+54	+48	+38	+24	+10	- 4	-16	-23
+50	+62	+66	+60	+48	+33	+15	- 7	-20	-30
+40	+62	+67	+69	+59	+41	+17	- 6	-22	-36
+30	+60	+66	+73	+65	+43	+19	- 5	-25	-42
+20	+56	+63	+71	+66	+44	+22	- 4	-27	-44
+10	+51	+67	+78	+74	+49	+20	-12	-33	-44
0	+48	+64	+77	+82	+56	+12	-27	-43	-40
-10	+40	+58	+71	+82	+60	0	-43	-58	-44
-20	+38	+55	+76	+87	+58	-14	-53	-70	-48
-30	+46	+66	+89	+90	+50	-16	-57	-72	-48
-40	+56	+70	+78	+73	+38	-20	-52	-72	-50
-50	+37	+45	+52	+47	+22	-20	-48	-65	-50
-60	+17	+20	+21	+16	0	-23	-44	-58	-56
-70	-30	-28	-23	-23	-25	-32	-42	-47	-47
-80	-66	-66	-65	-63	-62	-62	-63	-62	-57

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-18	-22	-27	-31	-33	-33	-31	-28	-23
+70	-20	-24	-29	-33	-34	-33	-31	-28	-25
+60	-25	-28	-30	-31	-27	-25	-23	-21	-18
+50	-34	-37	-35	-28	-26	-20	-16	-12	-10
+40	-44	-41	-30	-22	-25	-19	-13	- 7	- 4
+30	-46	-41	-27	-19	-21	-20	-11	- 5	0
+20	-47	-36	-22	-14	-16	-17	-10	- 4	+ 2
+10	-38	-23	-13	- 7	-13	-16	- 9	- 3	+ 6
0	-20	- 7	+ 2	+ 2	- 8	-13	- 9	- 3	+ 5
-10	-21	+ 2	+14	+ 8	0	-10	- 9	- 2	+ 6
-20	-22	0	+20	+17	+ 8	- 1	- 4	+ 2	+ 9
-30	-23	- 8	+ 1	+10	+ 7	- 3	- 4	+ 6	+12
-40	-28	-16	- 8	- 5	- 5	- 3	- 5	+ 3	+14
-50	-37	-27	-22	-16	-11	0	+ 8	+13	+24
-60	-47	-38	-29	-22	-10	+ 2	+13	+24	+34
-70	-43	-35	-25	-14	- 3	+11	+23	+37	+48
-80	-50	-38	-20	- 2	+13	+27	+38	+52	+64

[a] North latitudes positive, south latitudes negative

Table 33--Concluded

Values of secular change in east component (Y) of magnetic field intensity for 1922.5, expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-19	-17	-13	-11	- 8	- 5	- 2	+ 2	+ 5
+70	-22	-18	-14	-11	- 8	- 7	- 8	- 9	- 8
+60	-16	-13	-10	- 9	- 8	- 9	-13	-19	-18
+50	- 7	- 5	- 4	- 4	- 6	-10	-17	-24	-24
+40	- 1	0	0	0	- 1	- 6	-14	-22	-22
+30	+ 3	+ 5	+ 5	+ 5	+ 5	0	- 5	-11	- 8
+20	+ 4	+ 8	+ 9	+12	+11	+ 8	+ 5	+ 4	+ 9
+10	+ 7	+11	+15	+16	+18	+18	+18	+21	+26
0	+ 9	+14	+18	+22	+23	+23	+23	+27	+36
-10	+16	+26	+28	+28	+25	+24	+22	+21	+25
-20	+18	+29	+31	+30	+29	+27	+23	+21	+13
-30	+21	+30	+34	+33	+30	+28	+25	+17	+ 2
-40	+24	+31	+36	+35	+34	+30	+26	+17	+ 3
-50	+31	+41	+45	+43	+39	+34	+28	+19	+ 6
-60	+44	+50	+53	+52	+48	+44	+38	+30	+15
-70	+58	+64	+67	+65	+62	+57	+48	+38	+27
-80	+76	+82	+84	+83	+79	+71	+62	+51	+41

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 8	+12	+17	+22	+27	+32	+34	+35	+33
+70	- 3	+ 2	+ 8	+16	+23	+32	+39	+43	+43
+60	-13	- 7	- 1	+ 8	+18	+30	+38	+46	+53
+50	-22	-18	- 7	+ 4	+11	+20	+31	+40	+51
+40	-15	-17	-21	-10	- 2	+ 9	+19	+32	+51
+30	- 4	- 6	-28	-48	-39	-21	+ 3	+24	+46
+20	+12	+ 1	-41	-72	-65	-47	-19	+14	+44
+10	+31	+ 6	-41	-87	-86	-66	-35	0	+35
0	+30	+ 4	-48	-92	-94	-72	-39	- 7	+25
-10	+14	-10	-52	-84	-85	-59	-30	- 5	+19
-20	- 2	-24	-54	-79	-73	-48	-23	+ 2	+22
-30	-17	-32	-55	-70	-66	-41	-13	+11	+30
-40	-17	-36	-52	-61	-67	-36	- 8	+15	+36
-50	-12	-33	-47	-57	-55	-34	- 8	+12	+27
-60	- 2	-18	-31	-41	-42	-32	-18	- 2	+ 7
-70	+11	- 2	-13	-23	-32	-38	-37	-34	-32
-80	+31	+19	+ 7	- 8	-19	-32	-43	-52	-61

[a] North latitudes positive, south latitudes negative

Table 34

Values of secular change in east component (Y) of magnetic field intensity for 1932.5, expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+38	+37	+33	+29	+22	+14	+ 6	- 2	-10
+70	+51	+47	+39	+30	+20	+12	+ 4	- 6	-15
+60	+55	+52	+42	+29	+16	+ 4	- 6	-12	-18
+50	+60	+60	+52	+41	+28	+ 7	- 7	-16	-23
+40	+59	+65	+65	+57	+28	+ 8	- 9	-20	-30
+30	+52	+63	+67	+53	+32	+ 7	-11	-24	-34
+20	+51	+63	+71	+53	+29	+ 5	-12	-31	-38
+10	+48	+59	+67	+52	+27	0	-22	-39	-40
0	+43	+52	+59	+45	+21	- 8	-39	-49	-40
-10	+42	+48	+50	+38	+16	-13	-44	-58	-42
-20	+44	+50	+51	+37	+15	-22	-56	-68	-42
-30	+48	+56	+53	+42	+16	-29	-67	-71	-44
-40	+44	+49	+46	+34	+12	-24	-59	-72	-48
-50	+35	+37	+30	+21	+ 5	-17	-41	-57	-50
-60	+13	+14	+14	+10	- 5	-21	-38	-48	-45
-70	-32	-30	-29	-30	-37	-42	-48	-52	-48
-80	-72	-72	-72	-72	-72	-72	-71	-62	-53

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	-18	-23	-27	-31	-33	-38	-38	-37	-34
+70	-22	-28	-31	-34	-34	-34	-33	-32	-30
+60	-22	-25	-28	-28	-28	-27	-27	-26	-24
+50	-28	-31	-28	-24	-22	-22	-23	-22	-18
+40	-35	-32	-24	-11	- 8	-16	-19	-17	-14
+30	-35	-26	-16	- 2	- 3	-14	-15	-14	- 8
+20	-32	-19	- 8	+ 3	+ 3	- 9	-11	- 8	- 4
+10	-23	-10	- 1	+11	+13	+ 2	- 4	- 1	+ 5
0	-13	+ 4	+ 9	+ 8	+10	+ 7	- 6	0	+ 7
-10	-14	+23	+22	+12	+ 7	+ 1	- 7	- 8	0
-20	-19	+19	+31	+23	+14	+ 7	+ 2	- 1	+ 2
-30	-22	+ 2	+27	+33	+26	+18	+ 7	+ 2	+ 5
-40	-29	-13	+ 9	+30	+33	+26	+10	+ 5	+ 8
-50	-36	-20	- 9	+ 7	+11	+ 8	- 2	- 2	+13
-60	-37	-28	-21	-14	- 8	- 2	+ 8	+21	+38
-70	-38	-28	-19	- 8	+ 2	+ 7	+26	+43	+60
-80	-43	-31	-14	+ 2	+16	+31	+44	+58	+70

[a] North latitudes positive, south latitudes negative

Table 34--Concluded

Values of secular change in east component (Y) of magnetic field intensity for 1932.5, expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-31	-27	-24	-21	-18	-14	-11	- 7	- 2
+70	-27	-22	-19	-18	-16	-14	-12	-11	- 8
+60	-21	-18	-14	-12	-12	-15	-17	-19	-20
+50	-15	-12	- 8	- 8	- 9	-15	-20	-24	-26
+40	-10	- 6	- 5	- 5	- 7	- 9	-11	-15	-14
+30	- 4	- 2	+ 1	0	+ 1	+ 1	+ 2	+ 1	+ 1
+20	+ 3	+ 6	+10	+ 7	+ 7	+ 7	+ 9	+16	+20
+10	+10	+14	+15	+16	+16	+13	+11	+12	+14
0	+14	+20	+23	+23	+22	+19	+16	+11	+ 6
-10	+ 9	+17	+23	+27	+26	+20	+15	+12	+ 3
-20	+ 8	+16	+26	+32	+30	+24	+16	+ 9	0
-30	+10	+20	+30	+37	+33	+23	+12	+ 2	- 7
-40	+20	+29	+38	+43	+36	+23	+ 9	- 4	-16
-50	+35	+47	+55	+53	+45	+31	+14	- 1	-14
-60	+51	+61	+63	+62	+57	+48	+34	+15	- 2
-70	+68	+72	+72	+68	+65	+61	+54	+45	+32
-80	+81	+86	+86	+84	+80	+75	+69	+62	+52

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 4	+12	+18	+24	+31	+33	+37	+39	+39
+70	- 2	+ 3	+11	+20	+30	+38	+43	+48	+52
+60	-18	-10	0	+12	+22	+32	+42	+50	+54
+50	-21	-15	- 7	+ 4	+16	+26	+35	+45	+54
+40	- 9	-10	-16	-11	+ 4	+16	+25	+36	+48
+30	- 1	- 8	-28	-34	-16	+ 2	+16	+28	+40
+20	+20	- 1	-36	-63	-42	-19	+ 3	+20	+36
+10	+11	- 5	-42	-88	-65	-39	-10	+16	+34
0	- 2	-13	-45	-85	-80	-48	-18	+10	+30
-10	- 5	-17	-49	-77	-75	-49	-20	+ 8	+32
-20	- 8	-22	-50	-69	-61	-36	-13	+12	+32
-30	-16	-29	-51	-62	-48	-24	- 4	+16	+35
-40	-26	-37	-52	-55	-42	-22	- 2	+16	+33
-50	-25	-37	-47	-51	-44	-26	- 8	+ 8	+25
-60	-18	-27	-34	-39	-40	-32	-19	- 6	+ 6
-70	+16	- 2	-15	-26	-33	-39	-39	-38	-35
-80	+41	+29	+12	- 2	-18	-32	-45	-57	-68

[a] North latitudes positive, south latitudes negative

Table 35

Values of secular change in east component (Y) of magnetic field intensity for 1942.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 31	+ 28	+ 24	+ 19	+ 14	+ 10	+ 5	+ 1	- 7
+70	+ 35	+ 33	+ 31	+ 27	+ 22	+ 17	+ 12	+ 6	+ 1
+60	+ 41	+ 39	+ 32	+ 24	+ 14	+ 7	+ 1	- 5	- 11
+50	+ 48	+ 48	+ 44	+ 32	+ 18	+ 6	- 3	- 13	- 20
+40	+ 51	+ 55	+ 53	+ 39	+ 19	+ 3	- 8	- 19	- 28
+30	+ 48	+ 55	+ 52	+ 37	+ 19	+ 1	- 14	- 27	- 35
+20	+ 43	+ 51	+ 50	+ 37	+ 16	- 4	- 22	- 31	- 34
+10	+ 33	+ 38	+ 42	+ 32	+ 11	- 10	- 25	- 32	- 28
0	+ 25	+ 28	+ 34	+ 25	+ 5	- 19	- 40	- 40	- 27
-10	+ 21	+ 25	+ 29	+ 20	- 2	- 53	- 55	- 44	- 32
-20	+ 28	+ 32	+ 33	+ 22	- 12	- 79	- 63	- 52	- 36
-30	+ 36	+ 41	+ 39	+ 23	- 15	- 76	- 71	- 57	- 43
-40	+ 29	+ 29	+ 27	+ 9	- 24	- 62	- 77	- 64	- 51
-50	+ 17	+ 17	+ 9	- 6	- 27	- 53	- 70	- 67	- 59
-60	0	- 4	- 11	- 21	- 34	- 47	- 59	- 63	- 61
-70	- 20	- 27	- 35	- 47	- 58	- 62	- 63	- 63	- 58
-80	- 67	- 69	- 73	- 78	- 82	- 82	- 70	- 60	- 49

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 12	- 18	- 22	- 27	- 31	- 33	- 34	- 33	- 31
+70	- 8	- 14	- 22	- 28	- 32	- 34	- 34	- 32	- 28
+60	- 15	- 18	- 23	- 25	- 26	- 27	- 27	- 26	- 22
+50	- 26	- 31	- 30	- 28	- 23	- 23	- 24	- 21	- 18
+40	- 34	- 34	- 28	- 21	- 11	- 18	- 21	- 15	- 11
+30	- 34	- 28	- 19	- 8	- 7	- 17	- 15	- 10	- 5
+20	- 29	- 19	- 8	+ 2	- 2	- 13	- 12	- 6	- 1
+10	- 20	- 8	+ 6	+ 12	- 1	- 10	- 10	- 4	+ 2
0	- 13	+ 3	+ 15	+ 16	+ 1	- 6	- 6	- 2	+ 4
-10	- 16	+ 6	+ 20	+ 21	+ 6	- 1	- 2	+ 1	+ 6
-20	- 21	0	+ 25	+ 29	+ 16	+ 9	+ 7	+ 9	+ 12
-30	- 28	- 10	+ 13	+ 32	+ 24	+ 17	+ 14	+ 15	+ 20
-40	- 35	- 21	- 6	+ 11	+ 18	+ 21	+ 21	+ 22	+ 29
-50	- 44	- 29	- 19	- 8	+ 2	+ 17	+ 23	+ 30	+ 39
-60	- 49	- 32	- 18	- 7	+ 3	+ 14	+ 26	+ 42	+ 58
-70	- 46	- 34	- 17	+ 1	+ 17	+ 27	+ 38	+ 54	+ 74
-80	- 33	- 10	+ 18	+ 32	+ 45	+ 56	+ 64	+ 77	+ 90

[a] North latitudes positive, south latitudes negative

Table 35--Concluded

Values of secular change in east component (Y) of magnetic field intensity for 1942.5 expressed in gammas per year, for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	-28	-25	-22	-18	-15	-12	-10	-4	+2
+70	-24	-20	-17	-15	-13	-12	-12	-12	-10
+60	-18	-13	-10	-7	-7	-10	-13	-15	-14
+50	-12	-9	-6	-5	-6	-9	-13	-15	-15
+40	-7	-3	-2	-1	-3	-7	-12	-13	-19
+30	+1	+4	+5	+5	+3	-2	-8	-11	-7
+20	+4	+9	+13	+13	+9	+3	-2	-6	-6
+10	+7	+13	+20	+21	+16	+10	+3	+2	+2
0	+10	+18	+25	+26	+22	+17	+11	+8	+7
-10	+14	+22	+27	+30	+28	+22	+17	+11	+2
-20	+19	+27	+35	+37	+34	+25	+16	+5	-4
-30	+25	+34	+42	+43	+40	+29	+14	-2	-16
-40	+35	+44	+49	+51	+47	+35	+17	-3	-22
-50	+53	+69	+69	+60	+54	+40	+22	+4	-14
-60	+75	+83	+79	+70	+62	+43	+25	+11	-6
-70	+90	+97	+95	+86	+74	+54	+39	+27	+10
-80	+102	+110	+105	+91	+78	+65	+49	+30	+10

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+7	+12	+18	+22	+28	+32	+34	+34	+33
+70	-5	0	+7	+12	+19	+25	+31	+33	+35
+60	-10	-6	0	+8	+16	+25	+34	+38	+41
+50	-12	-8	-5	-2	+6	+17	+27	+36	+41
+40	-2	+1	-9	-15	-12	0	+14	+26	+39
+30	+3	0	-14	-31	-26	-14	+5	+23	+38
+20	+6	-3	-24	-54	-44	-25	-1	+16	+33
+10	+7	-11	-38	-61	-51	-35	-11	+9	+25
0	-1	-22	-51	-62	-50	-34	-12	+5	+17
-10	-11	-35	-61	-58	-45	-27	-10	+5	+16
-20	-17	-40	-55	-53	-36	-19	-2	+11	+22
-30	-25	-39	-48	-44	-30	-9	+8	+21	+29
-40	-34	-41	-46	-42	-28	-8	+8	+18	+25
-50	-30	-40	-43	-40	-31	-16	-2	+9	+14
-60	-22	-32	-36	-36	-30	-22	-12	-3	0
-70	-8	-20	-28	-37	-40	-31	-25	-20	-19
-80	-10	-25	-42	-57	-71	-70	-68	-65	-66

[a] North latitudes positive, south latitudes negative

Table 36

Values of secular change in inclination (I) for epoch 1912.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 0.9	+ 0.9	+ 0.9	+ 0.9	+ 1.1	+ 1.1	+ 1.3	+ 1.5	+ 1.9
+70	+ 0.2	+ 0.8	+ 1.1	+ 1.0	+ 1.2	+ 1.6	+ 2.0	+ 2.1	+ 2.4
+60	+ 0.7	+ 1.3	+ 1.7	+ 2.3	+ 2.8	+ 3.2	+ 3.5	+ 3.9	+ 3.9
+50	- 0.3	- 0.1	+ 1.0	+ 2.7	+ 4.0	+ 4.9	+ 5.4	+ 5.6	+ 5.2
+40	- 2.6	- 1.1	+ 1.0	+ 2.9	+ 4.6	+ 6.0	+ 6.9	+ 6.8	+ 5.6
+30	- 4.9	- 2.8	- 0.4	+ 2.2	+ 4.9	+ 7.4	+ 8.8	+ 7.9	+ 6.6
+20	- 8.4	- 4.5	- 2.0	+ 1.2	+ 4.9	+ 8.1	+10.0	+ 8.7	+ 6.6
+10	-12.3	- 5.9	- 3.1	- 0.6	+ 5.9	+ 9.9	+ 9.8	+ 8.2	+ 5.2
0	-15.2	- 8.8	- 5.2	- 2.3	+ 5.5	+10.7	+ 7.8	+ 4.2	+ 0.9
-10	-15.1	-10.9	- 6.8	- 3.8	+ 2.6	+ 9.1	+ 6.2	+ 3.0	+ 0.1
-20	-14.2	-10.4	- 7.7	- 4.8	+ 1.9	+ 6.4	+ 5.4	+ 3.2	+ 0.3
-30	-13.5	-11.3	- 9.6	- 6.5	- 0.6	+ 4.1	+ 4.8	+ 2.8	+ 0.7
-40	-13.6	-12.0	- 8.3	- 4.7	+ 0.6	+ 4.6	+ 5.1	+ 3.8	+ 2.1
-50	- 6.9	- 5.5	- 3.6	- 0.9	+ 2.4	+ 5.2	+ 6.3	+ 6.2	+ 4.6
-60	- 1.5	- 0.7	+ 0.5	+ 2.2	+ 4.3	+ 5.9	+ 6.8	+ 6.7	+ 5.8
-70	+ 1.3	+ 1.8	+ 2.6	+ 3.7	+ 4.5	+ 5.1	+ 5.3	+ 4.8	+ 4.0
-80	+ 2.7	+ 2.8	+ 3.0	+ 3.2	+ 3.2	+ 3.3	+ 3.0	+ 2.8	+ 2.4

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+ 1.9	+ 2.2	+ 2.2	+ 2.1	+ 1.9	+ 1.9	+ 1.7	+ 1.5	+ 1.3
+70	+ 2.5	+ 2.7	+ 2.6	+ 2.3	+ 2.0	+ 1.6	+ 1.3	+ 1.1	+ 0.8
+60	+ 3.5	+ 3.0	+ 2.2	+ 1.9	+ 1.7	+ 1.5	+ 1.0	+ 0.7	+ 0.3
+50	+ 4.3	+ 3.0	+ 2.1	+ 1.2	+ 1.3	+ 1.4	+ 0.6	- 0.1	- 0.7
+40	+ 3.9	+ 2.5	+ 1.1	+ 0.2	+ 0.2	+ 0.3	- 0.3	- 1.0	- 1.5
+30	+ 3.8	+ 2.0	- 0.3	- 1.1	- 1.2	- 1.3	- 1.8	- 2.5	- 2.9
+20	+ 2.9	- 0.4	- 1.6	- 2.1	- 1.8	- 1.9	- 2.5	- 3.5	- 4.0
+10	+ 0.3	- 1.9	- 2.9	- 3.0	- 2.2	- 2.1	- 2.8	- 3.7	- 4.4
0	- 1.9	- 4.2	- 4.4	- 3.0	- 2.4	- 2.4	- 2.9	- 3.5	- 4.3
-10	- 2.4	- 3.8	- 3.8	- 2.6	- 2.1	- 2.0	- 2.4	- 3.1	- 4.1
-20	- 2.1	- 2.6	- 2.6	- 2.3	- 2.1	- 2.1	- 2.3	- 3.1	- 3.8
-30	- 2.4	- 3.5	- 3.5	- 2.8	- 2.1	- 2.0	- 2.3	- 2.7	- 3.0
-40	- 0.5	- 2.2	- 2.3	- 1.8	- 1.2	- 1.0	- 1.4	- 1.5	- 1.4
-50	+ 2.8	+ 0.9	+ 0.1	0.0	0.0	- 0.4	- 1.0	- 1.3	- 1.3
-60	+ 4.3	+ 3.0	+ 1.8	+ 1.1	- 0.1	- 1.0	- 1.4	- 1.6	- 1.5
-70	+ 3.1	+ 2.3	+ 1.4	+ 0.5	- 0.6	- 1.6	- 1.6	+ 1.1	+ 1.5
-80	+ 2.0	+ 1.7	+ 1.5	+ 1.5	+ 1.9	+ 2.2	+ 2.6	+ 3.2	+ 3.7

[a] North latitudes positive, south latitudes negative

Table 36--Concluded

Values of secular change in inclination (I) for epoch 1912.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+ 1.2	+ 1.1	+ 1.0	+ 0.8	+ 0.9	+ 0.8	+ 0.8	+ 1.0	+ 1.1
+70	+ 0.6	+ 0.4	0.0	- 0.1	- 0.2	- 0.3	- 0.4	- 0.1	- 0.5
+60	- 0.3	- 0.8	- 1.3	- 1.3	- 1.2	- 1.0	- 0.8	- 0.5	- 0.8
+50	- 1.3	- 1.9	- 2.4	- 1.1	- 0.8	- 0.7	- 0.6	- 0.6	- 0.2
+40	- 2.0	- 2.8	- 3.2	- 1.1	- 0.3	+ 0.3	+ 0.5	+ 0.5	+ 1.4
+30	- 3.1	- 4.0	- 4.1	- 0.9	- 0.1	+ 0.7	+ 1.3	+ 1.2	+ 3.0
+20	- 4.0	- 5.1	- 5.2	- 0.7	- 0.8	+ 0.1	+ 1.6	+ 2.9	+ 4.5
+10	- 4.8	- 6.6	- 4.8	- 0.6	- 1.3	- 1.2	+ 0.3	+ 2.5	+ 5.6
0	- 5.3	- 6.3	- 4.2	- 1.0	- 1.1	- 1.5	- 0.3	+ 2.1	+ 5.3
-10	- 5.2	- 5.6	- 3.5	- 0.8	- 0.9	- 1.3	- 1.0	+ 1.0	+ 4.1
-20	- 4.4	- 4.5	- 3.2	- 0.8	- 0.5	- 0.9	- 1.0	- 0.7	+ 0.9
-30	- 2.9	- 2.5	- 1.7	+ 0.1	+ 0.8	+ 1.0	+ 0.8	+ 0.5	+ 0.4
-40	- 1.1	- 0.5	+ 0.3	+ 1.2	+ 1.8	+ 2.4	+ 2.6	+ 2.2	+ 1.8
-50	- 0.8	0.0	+ 1.2	+ 2.2	+ 3.0	+ 3.4	+ 3.5	+ 3.5	+ 3.4
-60	- 1.0	- 0.2	+ 0.8	+ 1.8	+ 2.5	+ 2.9	+ 3.3	+ 3.4	+ 3.7
-70	+ 1.3	+ 1.4	+ 1.5	+ 1.7	+ 2.0	+ 2.3	+ 2.6	+ 2.6	+ 2.5
-80	+ 3.1	+ 3.1	+ 3.2	+ 2.9	+ 2.8	+ 2.7	+ 2.5	+ 2.5	+ 2.4

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 0.9	+ 1.0	+ 0.9	+ 1.0	+ 0.9
+70	- 0.4	- 0.5	- 0.7	- 0.7	- 0.6	- 0.5	- 0.5	- 0.3	- 0.1
+60	- 1.5	- 2.6	- 2.4	- 2.1	- 1.9	- 1.2	- 0.7	- 0.4	+ 0.1
+50	- 0.3	- 0.9	-11.5	- 1.9	- 2.2	- 2.3	- 2.4	- 2.3	- 1.7
+40	+ 1.9	+ 2.0	+ 1.4	+ 0.1	- 1.4	- 3.3	- 4.7	- 4.6	- 3.6
+30	+ 4.7	+ 5.8	+ 5.5	+ 3.4	+ 0.4	- 3.7	- 6.9	- 7.8	- 7.0
+20	+ 7.2	+ 9.3	+10.5	+ 7.7	+ 2.3	- 5.0	- 9.5	-11.6	-11.0
+10	+ 9.9	+12.0	+11.8	+ 9.2	+ 1.9	- 7.3	-12.1	-15.1	-15.3
0	+10.2	+13.1	+12.8	+ 9.2	- 0.5	- 9.5	-14.2	-17.5	-18.0
-10	+ 8.5	+12.4	+12.1	+ 6.2	- 4.1	-10.5	-16.4	-18.9	-18.6
-20	+ 3.9	+ 8.8	+10.6	- 0.1	- 5.2	- 8.6	-16.8	-18.1	-17.1
-30	+ 1.2	+ 7.3	+10.6	- 2.1	- 3.7	- 7.2	-14.7	-16.1	-15.1
-40	+ 1.8	+ 5.3	+ 5.6	- 2.6	- 4.3	- 6.7	-11.4	-13.8	-14.3
-50	+ 3.3	+ 4.6	+ 3.6	+ 0.1	- 2.7	- 4.9	- 6.5	- 7.5	- 7.7
-60	+ 3.3	+ 4.0	+ 3.8	+ 2.9	+ 1.4	+ 0.2	- 0.7	- 1.3	- 1.7
-70	+ 2.4	+ 2.4	+ 2.3	+ 2.4	+ 2.3	+ 1.9	+ 1.5	+ 1.3	+ 1.3
-80	+ 2.1	+ 2.0	+ 1.9	+ 1.9	+ 2.0	+ 2.1	+ 2.1	+ 2.3	+ 2.5

[a] North latitudes positive, south latitudes negative

Table 37

Values of secular change in inclination (I) for epoch 1922.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 1.4	+ 1.4	+ 1.5	+ 1.6	+ 1.6	+ 1.7	+ 1.9	+ 2.0	+ 2.6
+70	+ 1.1	+ 1.5	+ 1.8	+ 1.8	+ 2.1	+ 2.2	+ 2.2	+ 2.4	+ 2.6
+60	+ 0.9	+ 1.5	+ 2.1	+ 2.5	+ 3.4	+ 3.8	+ 4.1	+ 4.1	+ 4.1
+50	- 0.1	+ 1.3	+ 2.8	+ 3.9	+ 4.6	+ 5.1	+ 5.2	+ 5.2	+ 4.4
+40	- 2.0	- 0.3	+ 1.6	+ 3.2	+ 5.1	+ 6.2	+ 6.2	+ 5.8	+ 4.7
+30	- 4.4	- 1.4	+ 0.9	+ 3.2	+ 5.1	+ 6.9	+ 7.8	+ 6.5	+ 5.0
+20	- 7.0	- 3.6	- 0.6	+ 2.0	+ 5.1	+ 7.0	+ 7.3	+ 6.1	+ 3.9
+10	-10.0	- 5.6	- 3.5	+ 0.4	+ 4.1	+ 6.6	+ 6.1	+ 4.0	+ 1.6
0	-12.8	- 8.1	- 5.2	- 2.2	+ 2.3	+ 4.9	+ 3.7	+ 1.6	- 0.1
-10	-13.4	-10.3	- 7.3	- 4.0	+ 0.5	+ 2.4	+ 1.6	+ 0.1	- 1.7
-20	-13.2	-10.8	- 8.6	- 5.0	- 1.7	+ 0.8	+ 1.0	- 0.3	- 2.2
-30	-12.3	-10.7	- 8.9	- 6.2	- 2.7	+ 0.6	+ 1.1	- 0.1	- 2.3
-40	-10.9	- 9.0	- 5.7	- 2.9	0.0	+ 3.0	+ 3.7	+ 2.4	0.0
-50	- 5.1	- 3.2	- 1.8	+ 0.6	+ 3.6	+ 5.6	+ 6.1	+ 5.3	+ 2.7
-60	- 0.2	+ 0.9	+ 2.2	+ 3.9	+ 5.8	+ 6.8	+ 7.0	+ 6.1	+ 4.5
-70	+ 2.3	+ 2.9	+ 3.5	+ 4.2	+ 5.0	+ 5.1	+ 4.9	+ 4.2	+ 3.5
-80	+ 3.5	+ 3.6	+ 3.8	+ 3.9	+ 3.9	+ 3.9	+ 3.6	+ 3.4	+ 3.2

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+ 2.6	+ 2.9	+ 2.8	+ 2.5	+ 2.2	+ 2.0	+ 1.6	+ 1.4	+ 1.0
+70	+ 2.9	+ 3.1	+ 3.0	+ 2.6	+ 2.5	+ 1.9	+ 1.5	+ 1.2	+ 0.9
+60	+ 3.7	+ 3.0	+ 2.3	+ 2.0	+ 2.0	+ 1.7	+ 1.4	+ 1.1	+ 0.8
+50	+ 3.2	+ 2.2	+ 1.5	+ 1.3	+ 1.6	+ 1.6	+ 1.0	+ 0.4	+ 0.1
+40	+ 3.3	+ 2.2	+ 1.2	+ 0.6	+ 0.5	- 0.2	- 0.4	- 0.8	- 0.9
+30	+ 3.0	+ 1.0	0.0	0.0	- 0.4	- 1.1	- 1.5	- 1.7	- 1.9
+20	+ 1.7	- 0.7	- 1.3	- 1.1	- 0.8	- 1.2	- 2.0	- 2.2	- 2.6
+10	- 0.5	- 1.9	- 2.4	- 1.7	- 1.3	- 1.7	- 2.5	- 3.3	- 3.9
0	- 2.2	- 3.6	- 3.0	- 2.0	- 1.5	- 1.7	- 2.6	- 3.5	- 4.3
-10	- 3.4	- 4.5	- 2.8	- 2.3	- 1.8	- 1.5	- 2.1	- 2.9	- 3.4
-20	- 3.6	- 3.9	- 2.9	- 2.1	- 1.7	- 1.3	- 1.8	- 2.4	- 2.6
-30	- 3.8	- 3.8	- 3.4	- 2.6	- 1.9	- 1.5	- 1.6	- 1.9	- 2.2
-40	- 1.7	- 2.4	- 2.6	- 2.2	- 1.6	- 1.3	- 1.3	- 1.5	- 1.7
-50	+ 1.3	+ 0.1	- 0.3	- 0.6	- 0.7	- 0.7	- 0.9	- 1.2	- 1.0
-60	+ 3.0	+ 2.0	+ 1.3	+ 0.6	- 0.5	- 1.3	- 1.4	- 1.3	- 0.8
-70	+ 2.7	+ 1.8	+ 0.9	+ 0.1	- 0.6	- 1.0	- 0.4	+ 1.1	+ 1.2
-80	+ 2.8	+ 2.6	+ 2.4	+ 2.3	+ 2.4	+ 2.5	+ 2.7	+ 3.3	+ 3.9

[a] North latitudes positive, south latitudes negative

Table 37--Concluded

Values of secular change in inclination (I) for epoch 1922.5
in minutes per year, at 10-degree intervals of
geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+ 0.8	+ 0.5	+ 0.3	+ 0.4	+ 0.6	+ 0.7	+ 0.9	+ 1.1	+ 1.4
+70	+ 0.6	+ 0.3	- 0.1	- 0.1	- 0.2	- 0.3	- 0.3	- 0.2	- 1.4
+60	+ 0.3	- 0.1	- 0.3	- 0.2	- 0.2	- 0.2	- 0.2	- 0.3	- 0.6
+50	- 0.2	- 0.4	- 0.3	0.0	+ 0.2	+ 0.2	+ 0.1	+ 0.3	+ 0.1
+40	- 1.1	- 1.1	- 0.7	- 0.5	+ 0.1	+ 0.6	+ 0.6	+ 0.7	+ 0.8
+30	- 1.8	- 1.1	- 0.3	+ 0.1	+ 0.6	+ 0.9	+ 1.1	+ 1.2	+ 2.1
+20	- 2.6	- 1.0	+ 0.1	+ 0.3	+ 0.6	+ 1.1	+ 1.2	+ 1.6	+ 3.2
+10	- 3.6	- 1.4	- 0.1	+ 0.2	+ 0.3	+ 0.9	+ 1.4	+ 2.2	+ 3.5
0	- 3.8	- 1.6	- 0.4	- 0.2	0.0	+ 1.0	+ 1.3	+ 2.7	+ 4.2
-10	- 3.1	- 1.4	- 0.5	- 0.1	0.0	+ 0.8	+ 1.4	+ 2.1	+ 4.2
-20	- 2.2	- 1.4	- 0.7	- 0.1	+ 0.6	+ 1.1	+ 1.6	+ 1.7	+ 2.2
-30	- 1.9	- 1.4	- 0.9	- 0.2	+ 0.6	+ 1.5	+ 1.9	+ 1.6	+ 1.5
-40	- 1.5	- 1.3	- 0.7	+ 0.1	+ 0.9	+ 1.7	+ 2.4	+ 2.2	+ 1.9
-50	- 0.7	- 0.2	+ 0.4	+ 1.2	+ 1.8	+ 2.4	+ 2.8	+ 3.2	+ 3.1
-60	- 0.3	+ 0.6	+ 1.3	+ 2.0	+ 2.6	+ 3.1	+ 3.5	+ 3.9	+ 4.2
-70	+ 1.3	+ 1.6	+ 2.0	+ 2.3	+ 2.6	+ 2.9	+ 3.3	+ 3.6	+ 3.6
-80	+ 3.4	+ 3.3	+ 3.4	+ 3.4	+ 3.3	+ 3.3	+ 3.4	+ 3.6	+ 3.6

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 1.5	+ 1.1	+ 1.1	+ 1.0	+ 1.0	+ 1.0	+ 1.2	+ 1.3	+ 1.4
+70	- 0.4	- 0.5	- 0.5	- 0.5	- 0.3	- 0.1	+ 0.2	+ 0.3	+ 0.7
+60	- 1.0	- 1.9	- 2.0	- 1.9	- 1.6	- 1.1	- 0.8	- 0.5	+ 0.1
+50	- 0.3	- 0.9	- 1.4	- 2.1	- 2.5	- 2.4	- 2.3	- 1.9	- 1.1
+40	+ 1.2	+ 0.9	+ 0.2	- 1.2	- 2.6	- 3.5	- 4.0	- 3.2	- 2.1
+30	+ 2.8	+ 3.4	+ 2.8	+ 1.0	- 2.0	- 4.6	- 6.6	- 6.8	- 6.4
+20	+ 4.8	+ 6.0	+ 5.6	+ 3.0	- 1.0	- 6.1	- 9.6	-11.1	-10.0
+10	+ 5.9	+ 9.2	+ 9.1	+ 4.9	- 0.7	- 7.9	-12.1	-15.3	-14.4
0	+ 7.6	+10.0	+10.0	+ 4.3	- 2.0	-10.3	-14.1	-16.9	-16.5
-10	+ 7.5	+ 9.4	+ 8.8	+ 1.1	- 5.9	-11.9	-15.9	-17.7	-16.8
-20	+ 4.2	+ 5.9	+ 4.3	- 1.5	- 7.8	-12.5	-16.3	-16.5	-15.5
-30	+ 1.8	+ 3.7	+ 3.4	- 2.9	- 7.4	-11.3	-14.5	-14.9	-13.8
-40	+ 2.3	+ 3.1	+ 1.7	- 3.4	- 6.0	- 8.4	-10.9	-11.3	-11.0
-50	+ 3.2	+ 2.9	+ 1.5	- 0.7	- 3.2	- 5.0	- 6.4	- 7.0	- 6.2
-60	+ 3.8	+ 3.6	+ 2.8	+ 2.3	+ 1.4	+ 0.1	- 0.8	- 1.2	- 0.9
-70	+ 3.6	+ 3.8	+ 3.5	+ 3.4	+ 3.1	+ 2.5	+ 2.2	+ 1.9	+ 2.0
-80	+ 3.6	+ 3.5	+ 3.3	+ 3.3	+ 3.2	+ 3.3	+ 3.3	+ 3.3	+ 3.4

[a] North latitudes positive, south latitudes negative

Table 38

Values of secular change in inclination (I) for epoch 1932.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 2.1	+ 2.3	+ 2.7	+ 2.8	+ 3.0	+ 3.1	+ 3.1	+ 3.1	+ 3.4
+70	+ 1.7	+ 2.2	+ 2.7	+ 3.1	+ 3.6	+ 3.6	+ 3.8	+ 3.8	+ 4.0
+60	+ 1.2	+ 2.2	+ 3.1	+ 3.6	+ 4.0	+ 4.2	+ 4.1	+ 3.9	+ 3.6
+50	+ 0.7	+ 2.1	+ 3.1	+ 3.8	+ 4.3	+ 4.5	+ 4.2	+ 3.5	+ 2.7
+40	- 1.0	+ 0.2	+ 1.4	+ 2.7	+ 4.1	+ 4.9	+ 4.9	+ 3.9	+ 2.5
+30	- 4.3	- 2.3	+ 0.2	+ 3.0	+ 4.5	+ 5.0	+ 4.2	+ 2.6	+ 1.0
+20	- 7.0	- 3.8	- 0.9	+ 1.8	+ 4.4	+ 5.1	+ 3.7	+ 1.3	- 0.2
+10	- 9.5	- 6.4	- 2.6	+ 0.4	+ 3.2	+ 4.3	+ 2.5	+ 0.9	- 0.5
0	-11.6	- 9.0	- 6.0	- 2.6	+ 0.3	+ 1.8	+ 1.0	+ 0.3	- 2.1
-10	-12.2	-10.4	- 8.4	- 5.5	- 2.4	- 1.6	- 1.2	- 1.6	- 3.6
-20	-11.6	-10.2	- 7.9	- 4.6	- 2.9	- 2.6	- 3.1	- 3.5	- 4.3
-30	- 9.5	- 8.1	- 5.9	- 3.7	- 1.2	+ 0.2	- 0.2	- 1.4	- 3.5
-40	- 6.4	- 4.7	- 2.5	- 0.4	+ 1.5	+ 2.8	+ 3.1	+ 2.0	- 0.4
-50	- 2.4	- 1.2	+ 0.4	+ 2.2	+ 3.9	+ 4.7	+ 4.6	+ 4.5	+ 2.6
-60	+ 1.0	+ 1.8	+ 3.0	+ 4.1	+ 5.0	+ 5.6	+ 5.7	+ 4.7	+ 3.1
-70	+ 3.1	+ 3.6	+ 4.1	+ 4.6	+ 5.0	+ 4.6	+ 4.1	+ 3.5	+ 2.6
-80	+ 4.5	+ 4.6	+ 5.4	+ 4.9	+ 4.9	+ 4.9	+ 4.4	+ 4.2	+ 3.8

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+ 3.1	+ 3.1	+ 3.0	+ 2.6	+ 2.2	+ 2.0	+ 1.7	+ 1.5	+ 1.3
+70	+ 3.9	+ 3.7	+ 3.3	+ 2.6	+ 2.2	+ 1.7	+ 1.3	+ 1.1	+ 0.8
+60	+ 3.1	+ 2.4	+ 1.8	+ 1.3	+ 0.9	+ 0.6	+ 0.6	+ 0.7	+ 0.5
+50	+ 2.0	+ 1.3	+ 0.8	+ 0.6	+ 0.3	+ 0.1	- 0.1	- 0.3	- 0.5
+40	+ 1.1	+ 0.4	- 0.1	+ 0.3	+ 0.9	+ 0.2	- 0.2	- 0.6	- 1.0
+30	+ 0.1	- 0.7	- 0.9	0.0	+ 0.8	+ 0.3	- 0.3	- 1.2	- 1.7
+20	- 1.0	- 1.7	- 1.6	- 0.4	+ 0.3	- 0.5	- 1.4	- 2.2	- 2.8
+10	- 1.8	- 2.5	- 1.6	- 0.6	- 0.2	- 0.8	- 1.7	- 2.5	- 3.4
0	- 3.5	- 2.5	- 1.7	- 1.5	- 1.3	- 1.4	- 2.2	- 2.7	- 3.5
-10	- 5.4	- 3.8	- 1.9	- 1.6	- 1.8	- 1.8	- 2.3	- 2.9	- 3.6
-20	- 5.2	- 5.1	- 2.5	- 1.6	- 1.4	- 1.2	- 1.4	- 2.1	- 2.7
-30	- 4.6	- 4.7	- 2.5	- 0.7	- 0.3	- 0.3	- 0.6	- 1.2	- 1.7
-40	- 2.3	- 2.5	- 1.8	- 0.8	0.0	+ 0.3	+ 0.2	- 0.2	- 0.8
-50	+ 0.8	- 0.2	- 0.3	- 0.1	0.0	0.0	- 0.6	- 0.9	- 1.0
-60	+ 2.0	+ 1.2	+ 0.6	+ 0.1	- 0.7	- 1.2	- 1.3	- 1.2	- 0.5
-70	+ 1.8	+ 1.0	+ 0.3	- 0.4	- 1.0	- 0.7	+ 1.7	+ 2.2	+ 2.0
-80	+ 3.2	+ 3.6	+ 3.3	+ 3.1	+ 3.1	+ 3.4	+ 3.6	+ 4.3	+ 5.0

[a] North latitudes positive, south latitudes negative

Table 38--Concluded

Values of secular change in inclination (I) for epoch 1932.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+ 1.3	+ 1.1	+ 1.0	+ 1.0	+ 1.1	+ 0.9	+ 1.1	+ 1.4	+ 1.7
+70	+ 0.6	+ 0.3	+ 0.2	0.0	- 0.1	- 0.2	- 0.3	- 0.6	- 1.5
+60	+ 0.1	- 0.3	- 0.3	- 0.4	- 0.4	- 0.3	- 0.2	- 0.3	- 0.7
+50	- 0.7	- 0.9	- 1.2	- 0.8	- 0.6	- 0.3	- 0.2	- 0.1	- 0.1
+40	- 1.3	- 1.7	- 2.0	- 1.0	- 0.4	- 0.2	0.0	+ 0.5	+ 0.8
+30	- 2.3	- 2.9	- 2.9	- 1.3	- 0.5	- 0.2	+ 0.1	+ 1.4	+ 2.2
+20	- 3.3	- 4.2	- 4.2	- 1.8	- 0.5	- 0.2	+ 0.3	+ 2.3	+ 3.9
+10	- 4.3	- 5.7	- 4.4	- 1.7	- 0.5	- 0.2	+ 0.4	+ 2.6	+ 4.8
0	- 4.7	- 5.2	- 4.1	- 1.7	- 0.5	0.0	0.6	+ 2.4	+ 5.3
-10	- 4.5	- 4.6	- 3.4	- 1.6	- 0.4	+ 0.4	+ 0.7	+ 1.1	+ 3.9
-20	- 3.4	- 3.7	- 2.8	- 1.4	- 0.2	+ 0.3	+ 0.5	+ 0.6	+ 1.6
-30	- 2.2	- 2.1	- 1.5	- 0.7	+ 0.2	+ 0.6	+ 0.7	+ 0.8	+ 0.7
-40	- 0.6	- 0.5	- 0.2	+ 0.5	+ 0.7	+ 1.0	+ 1.0	+ 0.6	+ 0.3
-50	- 0.3	+ 0.2	+ 0.8	+ 1.5	+ 2.1	+ 2.4	+ 2.1	+ 1.7	+ 1.6
-60	0.0	+ 0.8	+ 1.6	+ 2.4	+ 2.8	+ 3.0	+ 3.1	+ 3.0	+ 2.9
-70	+ 2.0	+ 2.0	+ 2.4	+ 2.6	+ 2.9	+ 3.5	+ 3.8	+ 3.9	+ 3.9
-80	+ 4.1	+ 3.9	+ 4.0	+ 3.7	+ 3.8	+ 3.9	+ 4.0	+ 4.2	+ 4.2

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 1.5	+ 1.2	+ 1.2	+ 1.2	+ 1.3	+ 1.4	+ 1.6	+ 1.8	+ 2.1
+70	- 0.6	- 0.8	- 0.6	- 0.4	- 0.2	+ 0.1	+ 0.4	+ 0.8	+ 1.3
+60	- 1.1	- 2.0	- 1.8	- 1.9	- 1.5	- 1.1	- 0.7	- 0.2	+ 0.4
+50	- 0.4	- 0.9	- 1.2	- 1.4	- 1.4	- 1.5	- 1.8	- 1.3	- 0.4
+40	+ 1.4	+ 1.4	+ 0.6	- 0.5	- 1.5	- 2.2	- 3.0	- 3.2	- 2.3
+30	+ 2.7	+ 2.9	+ 2.4	+ 0.3	- 1.8	- 4.0	- 5.4	- 6.1	- 6.1
+20	+ 4.0	+ 4.4	+ 4.2	+ 1.5	- 2.7	- 5.9	- 9.0	- 9.7	- 9.0
+10	+ 5.4	+ 5.2	+ 5.0	+ 1.3	- 3.9	- 7.6	-11.6	-13.1	-11.8
0	+ 7.5	+ 7.7	+ 5.8	+ 1.4	- 4.5	- 9.3	-13.5	-14.9	-13.8
-10	+ 6.8	+ 7.9	+ 5.3	+ 0.1	- 6.4	-10.8	-13.9	-15.0	-14.4
-20	+ 3.5	+ 4.8	+ 2.8	- 2.8	- 7.7	-10.8	-13.2	-13.8	-13.1
-30	+ 0.8	+ 1.5	0.0	- 4.4	- 7.1	- 9.3	-11.1	-11.4	-10.4
-40	+ 0.3	+ 0.6	- 0.8	- 3.2	- 5.2	- 6.9	- 7.9	- 7.8	- 7.1
-50	+ 1.6	+ 1.7	+ 1.0	- 0.7	- 2.4	- 3.4	- 3.5	- 3.4	- 3.0
-60	+ 2.5	+ 2.5	+ 2.0	+ 1.6	+ 0.9	+ 0.6	+ 0.5	+ 0.3	+ 0.4
-70	+ 3.6	+ 3.8	+ 3.5	+ 3.1	+ 2.9	+ 2.7	+ 2.5	+ 2.4	+ 2.8
-80	+ 4.2	+ 4.1	+ 4.1	+ 4.2	+ 4.1	+ 4.2	+ 4.2	+ 4.2	+ 4.4

[a] North latitudes positive, south latitudes negative

Table 39

Values of secular change in inclination (I) for epoch 1942.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	+ 1.7	+ 1.8	+ 2.0	+ 2.2	+ 2.3	+ 2.4	+ 2.6	+ 2.8	+ 3.2
+70	+ 1.3	+ 1.8	+ 2.3	+ 2.4	+ 2.5	+ 2.3	+ 2.2	+ 2.4	+ 2.5
+60	+ 0.5	+ 1.1	+ 2.0	+ 2.8	+ 2.7	+ 2.1	+ 2.0	+ 2.0	+ 1.8
+50	- 0.1	+ 0.5	+ 2.0	+ 2.9	+ 2.8	+ 2.8	+ 2.8	+ 2.6	+ 2.0
+40	- 1.7	- 0.6	+ 1.1	+ 2.1	+ 3.0	+ 3.2	+ 3.0	+ 1.8	+ 1.1
+30	- 3.3	- 1.4	+ 0.7	+ 3.7	+ 4.5	+ 3.7	+ 2.6	+ 1.4	- 0.3
+20	- 4.4	- 1.3	+ 0.4	+ 2.1	+ 4.0	+ 3.3	+ 1.7	- 1.4	- 3.2
+10	- 6.7	- 3.7	- 1.6	+ 0.5	+ 2.6	+ 2.5	0.0	- 3.2	- 5.6
0	- 7.9	- 5.7	- 3.5	- 1.2	+ 0.9	+ 1.3	- 0.8	- 3.7	- 6.0
-10	- 7.3	- 6.1	- 4.4	- 2.6	- 1.8	- 1.9	- 2.7	- 4.7	- 6.3
-20	- 7.4	- 6.6	- 5.6	- 3.9	- 3.3	- 2.8	- 3.7	- 4.8	- 5.5
-30	- 6.8	- 6.5	- 4.4	- 2.8	- 1.1	0.0	- 1.3	- 3.2	- 4.0
-40	- 3.2	- 1.3	+ 0.4	+ 1.7	+ 2.6	+ 3.0	+ 2.1	+ 0.1	- 1.9
-50	- 0.3	+ 0.9	+ 2.4	+ 3.6	+ 4.1	+ 4.5	+ 3.9	+ 2.7	+ 1.0
-60	+ 1.9	+ 2.8	+ 3.7	+ 4.2	+ 4.8	+ 4.8	+ 4.4	+ 3.8	+ 3.1
-70	+ 3.0	+ 3.5	+ 3.9	+ 4.4	+ 4.8	+ 4.7	+ 4.4	+ 3.8	+ 3.1
-80	+ 4.2	+ 3.8	+ 3.7	+ 3.2	+ 2.9	+ 2.6	+ 2.2	+ 2.0	+ 1.7

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	+ 3.0	+ 3.0	+ 2.9	+ 2.5	+ 2.1	+ 1.9	+ 1.7	+ 1.6	+ 1.4
+70	+ 2.4	+ 2.1	+ 1.7	+ 1.2	+ 0.8	+ 0.4	+ 0.1	- 0.1	- 0.4
+60	+ 1.5	+ 1.0	+ 0.5	+ 0.2	- 0.1	- 0.4	- 0.4	- 0.7	- 0.9
+50	+ 1.1	+ 0.4	- 0.1	- 0.4	- 0.2	0.0	0.0	- 0.3	- 0.6
+40	+ 0.1	- 0.6	- 0.7	0.0	+ 0.3	+ 0.3	- 0.1	- 0.4	- 0.8
+30	- 1.2	- 1.3	- 0.9	- 0.3	+ 0.2	+ 0.2	- 0.5	- 1.0	- 1.7
+20	- 2.7	- 1.7	- 1.0	- 0.5	0.0	- 0.1	- 0.9	- 1.7	- 2.5
+10	- 4.0	- 1.9	- 1.0	- 0.6	- 0.4	- 0.6	- 1.4	- 2.3	- 3.3
0	- 5.3	- 2.4	- 1.1	- 0.8	- 0.7	- 0.8	- 1.6	- 2.6	- 3.4
-10	- 5.4	- 2.6	- 0.9	- 0.8	- 0.7	- 0.9	- 1.3	- 2.0	- 2.7
-20	- 5.7	- 3.0	- 1.0	- 0.6	- 0.6	- 0.6	- 0.7	- 1.3	- 1.9
-30	- 4.2	- 3.3	- 1.4	+ 0.1	+ 0.3	0.0	- 0.1	- 0.3	- 0.9
-40	- 3.0	- 3.1	- 2.6	- 1.8	- 0.7	- 0.1	0.0	- 0.1	- 0.2
-50	- 0.5	- 1.5	- 2.0	- 2.1	- 1.8	- 1.4	- 0.7	- 0.4	- 0.1
-60	+ 1.8	+ 0.5	- 0.3	- 0.9	- 1.5	- 1.6	- 1.0	- 0.4	+ 0.5
-70	+ 2.2	+ 1.3	+ 0.5	- 0.6	- 1.4	- 0.8	+ 1.4	+ 2.8	+ 3.1
-80	+ 1.5	+ 1.3	+ 1.3	+ 1.5	+ 1.8	+ 2.1	+ 2.5	+ 3.0	+ 3.6

[a] North latitudes positive, south latitudes negative

Table 39--Concluded

Values of secular change in inclination (I) for epoch 1942.5 in minutes per year, at 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	+ 1.3	+ 1.2	+ 1.1	+ 1.0	+ 1.1	+ 1.1	+ 1.2	+ 1.4	+ 1.4
+70	- 0.7	- 0.7	- 0.3	+ 0.1	+ 0.2	+ 0.3	0.0	- 0.6	- 1.3
+60	- 1.1	- 1.5	- 1.0	- 0.7	- 0.5	- 0.5	- 0.5	- 0.6	- 1.0
+50	- 0.7	- 0.8	- 0.8	- 0.7	- 0.9	- 0.8	- 0.8	- 0.9	- 0.8
+40	- 1.2	- 0.8	- 0.4	- 0.4	- 0.5	- 0.7	- 0.8	- 0.9	- 1.0
+30	- 1.8	- 0.8	0.0	+ 0.1	- 0.1	- 0.4	- 0.6	- 0.7	- 0.8
+20	- 2.6	- 1.1	+ 0.2	+ 0.9	+ 0.6	+ 0.2	- 0.4	- 0.7	- 0.5
+10	- 3.1	- 1.7	0.0	+ 1.3	+ 1.3	+ 0.8	+ 0.3	+ 0.4	+ 1.6
0	- 3.3	- 2.2	- 0.6	+ 1.0	+ 1.9	+ 1.4	+ 1.0	+ 2.2	+ 4.8
-10	- 2.9	- 2.4	- 1.4	0.0	+ 1.2	+ 1.1	+ 0.8	+ 2.4	+ 5.1
-20	- 2.1	- 2.1	- 1.7	- 0.4	+ 0.7	+ 0.7	+ 0.5	+ 0.7	+ 2.4
-30	- 1.1	- 1.0	- 0.4	+ 0.4	+ 1.1	+ 1.3	+ 0.5	+ 0.1	+ 0.7
-40	- 0.1	+ 0.3	+ 0.8	+ 1.4	+ 2.1	+ 2.5	+ 2.2	+ 1.6	+ 0.6
-50	+ 0.4	+ 0.9	+ 1.6	+ 2.3	+ 3.1	+ 3.7	+ 3.8	+ 3.4	+ 2.6
-60	+ 1.4	+ 2.3	+ 2.9	+ 3.4	+ 3.9	+ 4.3	+ 4.4	+ 4.5	+ 3.9
-70	+ 3.4	+ 3.7	+ 3.9	+ 4.0	+ 3.8	+ 3.8	+ 3.7	+ 3.7	+ 3.7
-80	+ 3.3	+ 3.2	+ 3.6	+ 3.8	+ 4.1	+ 4.2	+ 4.1	+ 4.3	+ 4.4

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	+ 1.1	+ 0.9	+ 0.9	+ 0.9	+ 0.9	+ 1.1	+ 1.3	+ 1.3	+ 1.6
+70	- 0.4	- 0.4	- 0.3	- 0.2	- 0.1	+ 0.1	+ 0.3	+ 0.5	+ 0.9
+60	- 1.4	- 1.5	- 1.4	- 1.3	- 1.3	- 1.2	- 0.8	- 0.5	+ 0.1
+50	- 0.9	- 0.9	- 1.1	- 1.8	- 2.4	- 2.8	- 2.5	- 1.8	- 1.2
+40	- 0.6	- 0.5	- 1.3	- 2.4	- 4.0	- 4.7	- 3.8	- 2.5	- 1.9
+30	- 0.3	0.0	- 1.0	- 2.9	- 4.7	- 5.9	- 5.1	- 4.2	- 4.2
+20	+ 0.5	- 0.2	- 2.2	- 4.0	- 5.4	- 6.9	- 7.1	- 7.0	- 6.6
+10	+ 2.7	+ 1.5	- 0.7	- 2.7	- 6.0	- 9.0	-10.4	-10.0	- 8.9
0	+ 5.3	+ 2.6	- 0.4	- 3.8	- 7.7	-11.8	-13.1	-11.9	-10.0
-10	+ 4.3	+ 1.2	- 2.2	- 6.0	- 9.8	-13.3	-12.9	-11.2	- 8.9
-20	+ 1.9	- 0.7	- 3.5	- 7.1	-10.2	-12.2	-11.6	- 9.9	- 8.1
-30	+ 0.2	- 1.5	- 4.0	- 6.4	- 9.0	-10.8	-11.0	- 9.3	- 7.7
-40	+ 0.1	- 1.7	- 3.5	- 5.1	- 6.9	- 7.9	- 7.8	- 6.5	- 4.5
-50	+ 2.0	+ 1.1	- 0.1	- 1.1	- 2.1	- 2.7	- 2.9	- 2.5	- 1.6
-60	+ 3.1	+ 2.7	+ 2.2	+ 1.6	+ 1.2	+ 0.9	+ 0.7	+ 0.6	+ 1.1
-70	+ 3.4	+ 3.5	+ 3.1	+ 2.9	+ 2.8	+ 2.6	+ 2.6	+ 2.7	+ 2.8
-80	+ 4.3	+ 4.3	+ 4.3	+ 4.4	+ 4.5	+ 4.5	+ 4.5	+ 4.4	+ 4.3

[a] North latitudes positive, south latitudes negative

Table 40

Values of secular change in total intensity (F) of magnetic field for 1912.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 43	- 42	- 44	- 44	- 45	- 45	- 45	- 45	- 45
+70	- 31	- 1	- 2	- 30	- 36	- 37	- 37	- 37	- 37
+60	- 22	- 8	- 21	- 23	- 21	- 22	- 27	- 25	- 23
+50	- 19	- 29	- 26	- 3	+ 9	+ 11	+ 7	- 1	- 4
+40	- 25	- 18	+ 1	+ 18	+ 27	+ 38	+ 37	+ 33	+ 32
+30	- 20	- 5	+ 7	+ 21	+ 34	+ 45	+ 53	+ 56	+ 56
+20	- 18	+ 1	+ 10	+ 17	+ 24	+ 30	+ 41	+ 48	+ 55
+10	- 9	0	+ 3	+ 3	+ 1	- 1	+ 5	+ 19	+ 34
0	+ 18	+ 12	+ 3	- 8	- 42	- 62	- 38	- 9	+ 18
-10	+ 39	+ 25	+ 2	- 25	- 76	-117	- 70	- 27	+ 12
-20	+ 38	+ 16	- 18	- 56	-122	-154	-105	- 57	- 7
-30	+ 12	- 19	- 53	- 99	-154	-172	-141	- 93	- 55
-40	- 47	- 64	- 96	-119	-149	-166	-152	-114	- 81
-50	- 70	- 83	- 99	-119	-134	-144	-133	-100	- 74
-60	- 89	- 88	- 92	-101	-105	-102	- 89	- 69	- 52
-70	- 91	- 80	- 73	- 69	- 64	- 59	- 49	- 39	- 31
-80	- 67	- 61	- 56	- 49	- 44	- 37	- 33	- 27	- 24

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 45	- 44	- 44	- 43	- 41	- 41	- 42	- 43	- 44
+70	- 38	- 39	- 39	- 37	- 32	- 32	- 36	- 39	- 43
+60	- 24	- 28	- 40	- 25	- 6	0	- 16	- 28	- 38
+50	- 4	- 11	- 20	- 22	- 3	+ 14	- 2	- 21	- 38
+40	+ 24	+ 12	+ 2	- 6	- 5	- 6	- 19	- 31	- 39
+30	+ 42	+ 27	+ 9	- 7	- 3	- 4	- 10	- 20	- 27
+20	+ 52	+ 36	+ 15	+ 8	+ 3	+ 1	- 1	- 4	- 12
+10	+ 38	+ 28	+ 17	+ 8	+ 2	- 2	- 4	- 1	- 2
0	+ 33	+ 38	+ 29	+ 12	+ 1	- 3	- 3	0	+ 1
-10	+ 36	+ 44	+ 31	+ 7	- 2	- 4	- 2	0	+ 2
-20	+ 19	+ 20	+ 6	- 7	- 9	- 7	- 5	- 3	- 2
-30	- 25	- 22	- 23	- 19	- 13	- 6	- 2	+ 1	0
-40	- 53	- 42	- 36	- 29	- 14	- 5	+ 2	+ 4	+ 2
-50	- 56	- 41	- 30	- 22	- 15	- 9	- 6	- 2	- 4
-60	- 40	- 32	- 22	- 10	- 5	- 1	+ 3	+ 8	+ 5
-70	- 24	- 13	- 1	+ 2	+ 10	+ 12	+ 15	+ 14	+ 14
-80	- 17	- 12	- 8	- 3	0	+ 2	+ 3	+ 2	0

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[a] North latitudes positive, south latitudes negative

Table 40--Concluded

Values of secular change in total intensity (F) of magnetic field for 1912.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 45	- 45	- 46	- 46	- 47	- 48	- 49	- 49	- 50
+70	- 49	- 56	- 63	- 59	- 55	- 55	- 57	- 59	- 63
+60	- 52	- 67	- 81	- 66	- 56	- 57	- 64	- 75	- 82
+50	- 55	- 75	- 93	- 62	- 55	- 55	- 69	- 93	- 97
+40	- 53	- 75	- 92	- 58	- 50	- 47	- 55	- 78	- 69
+30	- 38	- 62	- 79	- 48	- 45	- 42	- 43	- 67	- 64
+20	- 24	- 47	- 63	- 35	- 39	- 34	- 28	- 29	- 28
+10	- 13	- 31	- 39	- 30	- 26	- 22	- 12	- 8	- 1
0	- 4	- 16	- 27	- 30	- 30	- 25	- 12	+ 3	+ 18
-10	0	- 9	- 25	- 38	- 41	- 40	- 30	- 17	0
-20	- 3	- 13	- 30	- 53	- 59	- 58	- 54	- 39	- 24
-30	- 7	- 15	- 31	- 59	- 66	- 64	- 60	- 55	- 47
-40	- 11	- 23	- 42	- 60	- 73	- 79	- 78	- 69	- 65
-50	- 15	- 27	- 40	- 54	- 70	- 86	- 97	- 98	- 99
-60	- 10	- 24	- 35	- 48	- 66	- 84	-100	-110	-121
-70	+ 4	- 11	- 22	- 35	- 48	- 63	- 82	- 96	-109
-80	- 2	- 8	- 16	- 25	- 36	- 45	- 54	- 62	- 70

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 51	- 50	- 49	- 49	- 48	- 47	- 46	- 46	- 45
+70	- 67	- 67	- 66	- 63	- 58	- 50	- 45	- 43	- 38
+60	- 89	- 93	- 90	- 85	- 72	- 64	- 54	- 46	- 39
+50	- 96	-110	-120	-110	- 96	- 80	- 65	- 55	- 46
+40	- 83	-103	-113	-100	- 96	- 93	- 72	- 53	- 39
+30	- 65	- 80	- 71	- 71	- 83	- 94	- 88	- 60	- 35
+20	- 14	- 10	- 16	- 29	- 45	- 77	- 76	- 61	- 42
+10	+ 16	+ 24	+ 20	+ 17	- 9	- 49	- 50	- 39	- 23
0	+ 41	+ 52	+ 54	+ 44	+ 11	- 17	- 26	- 17	+ 6
-10	+ 13	+ 30	+ 41	+ 33	+ 14	- 1	- 2	+ 12	+ 31
-20	- 19	- 20	- 14	- 3	- 5	- 7	+ 14	+ 32	+ 40
-30	- 40	- 65	- 70	- 28	- 30	- 23	+ 7	+ 21	+ 26
-40	- 74	-115	-112	- 59	- 60	- 56	- 42	- 32	- 30
-50	-104	-126	-118	- 93	- 90	- 91	- 89	- 80	- 73
-60	-127	-139	-139	-123	-111	-109	-110	-103	- 95
-70	-118	-124	-127	-127	-123	-119	-113	-106	- 98
-80	- 77	- 82	- 85	- 89	- 88	- 86	- 83	- 78	- 75

[a] North latitudes positive, south latitudes negative

Table 41

Values of secular change in total intensity (F) of magnetic field for 1922.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geograpnic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 44	- 40	- 38	- 38	- 39	- 40	- 41	-43	-47
+70	- 18	- 8	- 9	- 20	- 20	- 20	- 26	-31	-35
+60	- 5	- 3	- 2	+ 5	+ 6	+ 3	- 4	-13	-24
+50	- 17	+ 6	+ 24	+ 35	+ 37	+ 28	+ 20	+10	+ 2
+40	- 23	- 2	+ 13	+ 26	+ 41	+ 54	+ 50	+47	+40
+30	- 18	+ 4	+ 21	+ 33	+ 44	+ 54	+ 63	+56	+47
+20	- 13	+ 5	+ 14	+ 20	+ 29	+ 38	+ 45	+47	+41
+10	- 8	0	+ 2	+ 5	+ 6	+ 16	+ 29	+36	+41
0	+ 13	+ 8	+ 1	- 10	- 23	- 27	- 6	+13	+31
-10	+ 29	+ 19	+ 2	- 28	- 61	- 62	- 35	- 3	+26
-20	+ 22	+ 9	- 24	- 72	- 94	-100	- 74	-26	+ 9
-30	- 8	- 38	- 85	-119	-134	-135	-116	-68	-31
-40	- 60	- 88	-116	-144	-156	-155	-138	-94	-61
-50	- 86	-106	-127	-142	-153	-141	-129	-95	-75
-60	-103	-109	-113	-119	-117	-109	- 95	-79	-64
-70	-103	- 98	- 91	- 86	- 82	- 75	- 63	-52	-41
-80	- 82	- 76	- 69	- 62	- 55	- 50	- 43	-39	-32

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 48	- 48	- 48	- 47	- 47	- 48	- 50	- 54	- 56
+70	- 39	- 41	- 40	- 34	- 24	- 24	- 30	- 36	- 43
+60	- 31	- 35	- 33	- 21	+ 3	+ 5	- 8	- 19	- 30
+50	- 2	- 14	- 22	- 15	+ 4	+ 9	- 9	- 20	- 29
+40	+ 28	+ 13	- 2	- 10	- 6	- 14	- 18	- 25	- 35
+30	+ 32	+ 15	+ 2	+ 2	- 3	- 8	- 15	- 23	- 32
+20	+ 29	+ 15	+ 9	+ 7	+ 4	- 3	- 11	- 19	- 28
+10	+ 36	+ 27	+ 20	+ 12	+ 5	0	- 5	- 13	- 22
0	+ 38	+ 39	+ 27	+ 14	+ 3	- 3	- 4	- 6	- 9
-10	+ 48	+ 56	+ 32	+ 16	+ 5	- 3	- 2	+ 2	+ 2
-20	+ 33	+ 40	+ 28	+ 15	+ 3	- 6	- 1	+ 4	+ 6
-30	- 5	+ 13	+ 15	+ 5	- 4	- 9	- 4	+ 6	+ 4
-40	- 39	- 19	- 5	- 4	- 9	- 10	- 4	+ 2	0
-50	- 53	- 35	- 23	- 18	- 14	- 5	+ 1	+ 2	- 7
-60	- 46	- 29	- 19	- 10	+ 1	+ 11	+ 18	+ 7	- 8
-70	- 33	- 24	- 15	- 5	+ 7	+ 12	+ 5	- 4	- 14
-80	- 28	- 25	- 20	- 18	- 18	- 18	- 20	- 22	- 29

[a] North latitudes positive, south latitudes negative

Table 41--Concluded

Values of secular change in total intensity (F) of magnetic field for 1922.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 58	- 60	- 63	- 63	- 64	- 66	- 66	- 66	- 66
+70	- 51	- 55	- 54	- 52	- 55	- 64	- 73	- 76	- 78
+60	- 37	- 40	- 42	- 38	- 47	- 59	- 71	- 77	- 85
+50	- 37	- 44	- 48	- 49	- 50	- 57	- 68	- 79	- 91
+40	- 45	- 54	- 56	- 59	- 54	- 53	- 61	- 79	- 96
+30	- 43	- 44	- 44	- 49	- 48	- 50	- 57	- 66	- 64
+20	- 39	- 39	- 37	- 41	- 43	- 44	- 46	- 45	- 28
+10	- 30	- 32	- 32	- 35	- 37	- 37	- 35	- 30	- 21
0	- 15	- 23	- 27	- 28	- 29	- 29	- 30	- 26	- 16
-10	- 4	- 14	- 22	- 26	- 29	- 35	- 36	- 32	- 29
-20	- 1	- 15	- 24	- 31	- 37	- 46	- 49	- 48	- 46
-30	- 8	- 23	- 34	- 45	- 55	- 63	- 65	- 64	- 66
-40	- 11	- 28	- 41	- 54	- 66	- 77	- 86	- 88	- 91
-50	- 16	- 29	- 45	- 60	- 75	- 92	-109	-121	-124
-60	- 24	- 37	- 51	- 66	- 83	-101	-121	-137	-149
-70	- 24	- 36	- 50	- 66	- 84	-100	-112	-125	-135
-80	- 34	- 43	- 52	- 59	- 69	- 78	- 85	- 92	- 99

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 64	- 63	- 61	- 59	- 57	- 56	- 52	- 49	- 47
+70	- 81	- 79	- 75	- 66	- 56	- 49	- 45	- 38	- 29
+60	- 91	- 93	- 92	- 88	- 77	- 68	- 57	- 41	- 20
+50	- 98	-107	-112	-107	- 97	- 83	- 68	- 50	- 31
+40	-104	-109	-119	-124	-117	- 94	- 68	- 41	- 21
+30	- 63	- 66	- 69	- 84	- 96	- 96	- 87	- 58	- 39
+20	- 19	- 14	- 30	- 47	- 64	- 78	- 77	- 59	- 37
+10	- 10	+ 10	+ 15	- 4	- 30	- 55	- 50	- 38	- 21
0	- 5	+ 8	+ 19	+ 7	- 9	- 30	- 31	- 16	+ 6
-10	- 26	- 19	- 7	- 10	- 18	- 22	- 15	+ 4	+ 24
-20	- 54	- 55	- 45	- 32	- 23	- 15	+ 2	+ 16	+ 24
-30	- 74	- 83	- 76	- 50	- 34	- 23	- 8	- 3	0
-40	- 99	-113	-109	- 80	- 70	- 59	- 48	- 43	- 42
-50	-129	-136	-127	-124	-121	-110	-101	- 95	- 86
-60	-152	-151	-150	-147	-144	-137	-126	-111	-103
-70	-142	-145	-145	-145	-138	-131	-124	-117	-109
-80	-102	-105	-107	-106	-105	-102	- 98	- 92	- 89

[a] North latitudes positive, south latitudes negative

Table 42

Values of secular change in total intensity (F) of magnetic field for 1932.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	10	20	30	40	50	60	70	80
+80	- 36	- 32	- 29	- 24	- 24	- 21	- 19	- 19	- 18
+70	- 25	- 16	- 10	- 4	- 1	+ 1	+ 2	+ 2	+ 3
+60	- 7	+ 19	+ 30	+ 29	+ 27	+ 25	+ 24	+ 23	+ 23
+50	+ 7	+ 31	+ 41	+ 49	+ 54	+ 55	+ 55	+ 50	+ 43
+40	+ 8	+ 23	+ 31	+ 43	+ 62	+ 79	+ 90	+ 85	+ 64
+30	0	+ 20	+ 39	+ 57	+ 68	+ 73	+ 72	+ 65	+ 53
+20	- 10	+ 7	+ 21	+ 34	+ 44	+ 53	+ 56	+ 55	+ 56
+10	- 15	- 5	- 1	+ 3	+ 10	+ 18	+ 28	+ 43	+ 55
0	- 4	- 2	- 6	- 14	- 20	- 15	+ 4	+ 26	+ 50
-10	- 4	- 4	- 5	- 23	- 35	- 28	- 8	+ 18	+ 46
-20	- 16	- 17	- 36	- 75	- 78	- 58	- 26	0	+ 28
-30	- 48	- 67	-104	-126	-125	-104	- 66	- 31	- 7
-40	- 75	- 95	-119	-139	-145	-124	- 97	- 64	- 37
-50	- 91	-106	-122	-134	-135	-119	-100	- 78	- 52
-60	-100	-108	-112	-110	-100	- 86	- 74	- 55	- 34
-70	- 96	- 92	- 87	- 78	- 67	- 57	- 47	- 34	- 22
-80	- 73	- 67	- 57	- 53	- 43	- 36	- 28	- 23	- 17

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	100	110	120	130	140	150	160	170
+80	- 17	- 19	- 20	- 21	- 25	- 26	- 29	- 34	- 36
+70	+ 4	+ 1	- 2	- 6	- 10	- 16	- 18	- 21	- 25
+60	+ 21	+ 16	+ 11	+ 7	0	- 7	- 13	- 22	- 27
+50	+ 36	+ 28	+ 21	+ 19	+ 11	- 4	- 16	- 22	- 26
+40	+ 45	+ 35	+ 21	+ 20	+ 29	+ 10	- 1	- 7	- 13
+30	+ 45	+ 33	+ 16	+ 17	+ 22	+ 15	+ 7	- 1	- 8
+20	+ 45	+ 28	+ 16	+ 16	+ 20	+ 14	+ 9	+ 4	- 4
+10	+ 44	+ 31	+ 22	+ 15	+ 10	+ 6	+ 4	0	- 4
0	+ 57	+ 41	+ 18	- 5	- 15	- 9	- 8	- 6	- 5
-10	+ 67	+ 48	+ 27	+ 14	+ 2	- 9	- 11	- 14	- 13
-20	+ 56	+ 62	+ 42	+ 20	+ 8	+ 1	- 4	- 3	- 5
-30	+ 22	+ 46	+ 48	+ 29	+ 14	+ 3	- 7	- 5	- 3
-40	- 8	+ 13	+ 19	+ 13	+ 12	- 2	- 12	- 10	- 8
-50	- 19	- 6	+ 2	+ 6	+ 10	+ 8	+ 1	- 2	- 2
-60	- 12	- 2	+ 9	+ 19	+ 27	+ 31	+ 30	+ 19	+ 6
-70	- 8	+ 5	+ 15	+ 23	+ 30	+ 29	+ 23	+ 15	+ 5
-80	- 12	- 6	0	+ 2	+ 2	0	- 3	- 9	- 16

[a] North latitudes positive, south latitudes negative

Table 42--Concluded

Values of secular change in total intensity (F) of magnetic field for 1932.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 39	- 42	- 45	- 47	- 49	- 53	- 55	- 56	- 57
+70	- 27	- 28	- 29	- 33	- 36	- 42	- 48	- 56	- 63
+60	- 28	- 33	- 33	- 39	- 35	- 42	- 49	- 56	- 71
+50	- 31	- 40	- 44	- 43	- 45	- 48	- 56	- 67	- 82
+40	- 23	- 36	- 48	- 40	- 43	- 44	- 53	- 62	- 78
+30	- 18	- 34	- 48	- 37	- 35	- 42	- 51	- 49	- 58
+20	- 17	- 33	- 42	- 33	- 30	- 38	- 46	- 38	- 29
+10	- 12	- 26	- 30	- 27	- 28	- 34	- 40	- 33	- 16
0	- 7	- 13	- 19	- 25	- 29	- 33	- 36	- 33	- 21
-10	- 13	- 11	- 18	- 28	- 35	- 39	- 40	- 36	- 32
-20	- 8	- 17	- 31	- 41	- 50	- 57	- 58	- 48	- 44
-30	- 8	- 20	- 38	- 53	- 67	- 76	- 77	- 70	- 65
-40	- 11	- 25	- 42	- 64	- 85	- 99	-106	-105	-102
-50	- 16	- 30	- 47	- 71	- 94	-116	-129	-132	-131
-60	- 11	- 30	- 50	- 72	- 95	-118	-136	-147	-156
-70	- 9	- 25	- 43	- 64	- 85	-102	-115	-125	-137
-80	- 23	- 30	- 40	- 52	- 63	- 75	- 83	- 88	- 96

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 58	- 58	- 59	- 58	- 57	- 54	- 50	- 46	- 41
+70	- 73	- 84	- 86	- 77	- 67	- 59	- 50	- 42	- 33
+60	- 83	- 93	- 99	- 81	- 68	- 58	- 47	- 37	- 23
+50	- 95	-107	-103	- 86	- 72	- 60	- 47	- 33	- 16
+40	- 91	- 90	- 84	- 85	- 82	- 71	- 55	- 35	- 13
+30	- 72	- 69	- 63	- 72	- 78	- 83	- 77	- 53	- 22
+20	- 31	- 27	- 20	- 32	- 61	- 71	- 72	- 49	- 30
+10	- 6	- 1	+ 4	- 14	- 40	- 54	- 57	- 42	- 22
0	- 8	+ 2	+ 8	- 2	- 26	- 41	- 42	- 25	- 11
-10	- 26	- 11	- 1	- 4	- 18	- 29	- 28	- 17	- 8
-20	- 40	- 32	- 22	- 15	- 21	- 22	- 20	- 17	- 16
-30	- 63	- 63	- 52	- 42	- 35	- 31	- 30	- 34	- 39
-40	-100	-103	- 93	- 76	- 68	- 58	- 55	- 58	- 64
-50	-135	-140	-132	-118	-107	- 94	- 86	- 80	- 80
-60	-162	-157	-148	-142	-133	-121	-109	-102	- 98
-70	-145	-150	-148	-142	-136	-129	-119	-110	-101
-80	-101	-102	-103	-103	-103	- 97	- 92	- 85	- 79

[a] North latitudes positive, south latitudes negative

Table 43

Values of secular change in total intensity (F) of magnetic field for 1942.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees																	
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
+80	+ 16	+ 15	+ 14	+ 11	+ 10	+ 13	+ 19	+ 27	+ 37	+ 34	+ 31	+ 28	+ 23	+ 19	+ 12	+ 6	+ 1	- 5
+70	+ 23	+ 37	+ 46	+ 32	+ 14	+ 6	+ 25	+ 46	+ 54	+ 53	+ 48	+ 43	+ 36	+ 32	+ 26	+ 17	+ 6	- 9
+60	+ 18	+ 26	+ 36	+ 59	+ 38	+ 31	+ 49	+ 62	+ 68	+ 63	+ 59	+ 52	+ 47	+ 40	+ 33	+ 22	+ 11	- 4
+50	+ 29	+ 33	+ 63	+ 74	+ 63	+ 66	+ 76	+ 80	+ 76	+ 69	+ 65	+ 58	+ 51	+ 42	+ 28	+ 17	+ 7	- 1
+40	+ 30	+ 43	+ 63	+ 79	+ 90	+ 95	+ 95	+ 86	+ 76	+ 68	+ 58	+ 49	+ 40	+ 35	+ 20	+ 10	- 1	- 10
+30	+ 15	+ 42	+ 62	+ 89	+ 98	+ 94	+ 87	+ 79	+ 68	+ 58	+ 51	+ 39	+ 30	+ 26	+ 14	+ 4	- 5	- 14
+20	- 2	+ 18	+ 32	+ 48	+ 63	+ 68	+ 67	+ 53	+ 49	+ 47	+ 42	+ 33	+ 22	+ 15	+ 8	+ 2	- 5	- 12
+10	- 1	+ 5	+ 11	+ 20	+ 31	+ 46	+ 58	+ 63	+ 56	+ 51	+ 41	+ 29	+ 17	+ 11	+ 6	+ 1	- 2	- 9
0	+ 9	+ 9	+ 6	+ 5	+ 5	+ 26	+ 55	+ 71	+ 81	+ 73	+ 51	+ 33	+ 21	+ 12	+ 8	+ 5	+ 2	- 3
-10	+ 9	+ 9	- 4	- 14	- 12	+ 14	+ 54	+ 79	+ 98	+ 97	+ 73	+ 43	+ 28	+ 17	+ 11	+ 8	+ 6	+ 2
-20	- 14	- 18	- 33	- 53	- 36	+ 5	+ 50	+ 74	+ 92	+110	+ 82	+ 58	+ 38	+ 24	+ 13	+ 4	+ 2	+ 3
-30	- 43	- 56	- 88	- 98	- 64	- 34	- 2	+ 36	+ 59	+ 76	+ 73	+ 58	+ 47	+ 32	+ 18	+ 2	- 6	- 5
-40	- 71	- 95	-125	-117	- 90	- 67	- 45	- 9	+ 25	+ 43	+ 51	+ 44	+ 33	+ 26	+ 18	+ 6	- 7	- 10
-50	- 85	-100	-113	-107	- 93	- 76	- 58	- 37	- 1	+ 26	+ 38	+ 39	+ 34	+ 29	+ 23	+ 19	+ 13	+ 2
-60	- 78	- 83	- 82	- 75	- 60	- 44	- 27	- 10	+ 11	+ 30	+ 44	+ 52	+ 51	+ 42	+ 33	+ 24	+ 14	0
-70	- 53	- 49	- 42	- 31	- 18	- 8	+ 1	+ 12	+ 23	+ 32	+ 44	+ 51	+ 46	+ 39	+ 32	+ 23	+ 12	0
-80	- 26	- 20	- 15	- 9	- 2	+ 4	+ 8	+ 12	+ 16	+ 20	+ 23	+ 25	+ 24	+ 22	+ 18	+ 12	+ 4	- 3

[a] North latitudes positive, south latitudes negative

Table 43--Concluded

Values of secular change in total intensity (F) of magnetic field for 1942.5 expressed in gammas per year for 10-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	190	200	210	220	230	240	250	260
+80	- 8	- 8	- 3	+ 2	+ 2	- 2	- 6	- 9	- 9
+70	- 23	- 33	- 8	+ 3	+ 2	- 7	- 14	- 21	- 23
+60	- 19	- 36	- 26	- 15	- 6	+ 2	+ 6	0	- 5
+50	- 9	- 11	- 12	- 15	- 19	- 22	- 20	- 16	- 16
+40	- 17	- 14	- 11	- 13	- 17	- 23	- 31	- 36	- 38
+30	- 24	- 16	- 10	- 10	- 16	- 23	- 30	- 40	- 43
+20	- 20	- 17	- 12	- 10	- 15	- 22	- 29	- 36	- 39
+10	- 15	- 15	- 15	- 14	- 19	- 23	- 29	- 30	- 26
0	- 9	- 17	- 22	- 27	- 30	- 32	- 35	- 33	- 30
-10	- 5	- 15	- 25	- 34	- 42	- 46	- 47	- 52	- 54
-20	- 2	- 12	- 24	- 42	- 54	- 62	- 63	- 64	- 63
-30	- 4	- 11	- 25	- 46	- 64	- 75	- 84	- 85	- 83
-40	- 13	- 24	- 43	- 62	- 78	- 93	-102	-111	-112
-50	- 16	- 36	- 58	- 79	- 97	-112	-123	-131	-134
-60	- 18	- 37	- 58	- 80	- 99	-117	-133	-146	-151
-70	- 14	- 31	- 46	- 65	- 81	- 98	-109	-120	-124
-80	- 11	- 21	- 30	- 38	- 46	- 54	- 58	- 63	- 65

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	280	290	300	310	320	330	340	350
+80	- 8	- 7	- 5	- 4	0	+ 4	+ 7	+ 11	+ 14
+70	- 19	- 15	- 11	- 7	- 4	- 2	+ 2	+ 7	+ 14
+60	- 7	- 9	- 10	- 13	- 14	- 13	- 6	+ 4	+ 12
+50	- 13	- 10	- 4	- 10	- 25	- 30	- 11	+ 2	+ 13
+40	- 30	- 16	- 12	- 25	- 37	- 33	- 1	+ 28	+ 37
+30	- 34	- 23	- 32	- 39	- 44	- 41	- 24	- 7	- 2
+20	- 29	- 29	- 34	- 32	- 39	- 47	- 44	- 32	- 21
+10	- 18	- 9	- 6	- 11	- 31	- 42	- 40	- 26	- 12
0	- 20	- 9	- 10	- 18	- 29	- 32	- 23	- 9	+ 2
-10	- 38	- 28	- 26	- 26	- 23	- 18	- 5	+ 2	+ 6
-20	- 52	- 45	- 40	- 34	- 23	- 11	- 6	- 8	- 12
-30	- 72	- 63	- 56	- 48	- 40	- 32	- 30	- 33	- 36
-40	-106	- 96	- 89	- 83	- 74	- 62	- 53	- 51	- 59
-50	-134	-128	-114	-104	- 95	- 82	- 74	- 74	- 77
-60	-148	-140	-132	-120	-110	- 99	- 89	- 83	- 77
-70	-124	-119	-113	-107	- 99	- 89	- 78	- 69	- 61
-80	- 66	- 64	- 60	- 58	- 53	- 48	- 42	- 35	- 30

[a] North latitudes positive, south latitudes negative

FIGURES 116 - 143

Geomagnetic secular change, epochs 1912.5, 1922.5, 1932.5, and 1942.5

Figure Page

116-119. Declination 346

120-123. Horizontal intensity 354

124-127. North intensity 362

128-131. East intensity 370

132-135. Vertical intensity 378

136-139. Inclination 386

140-143. Total intensity 394

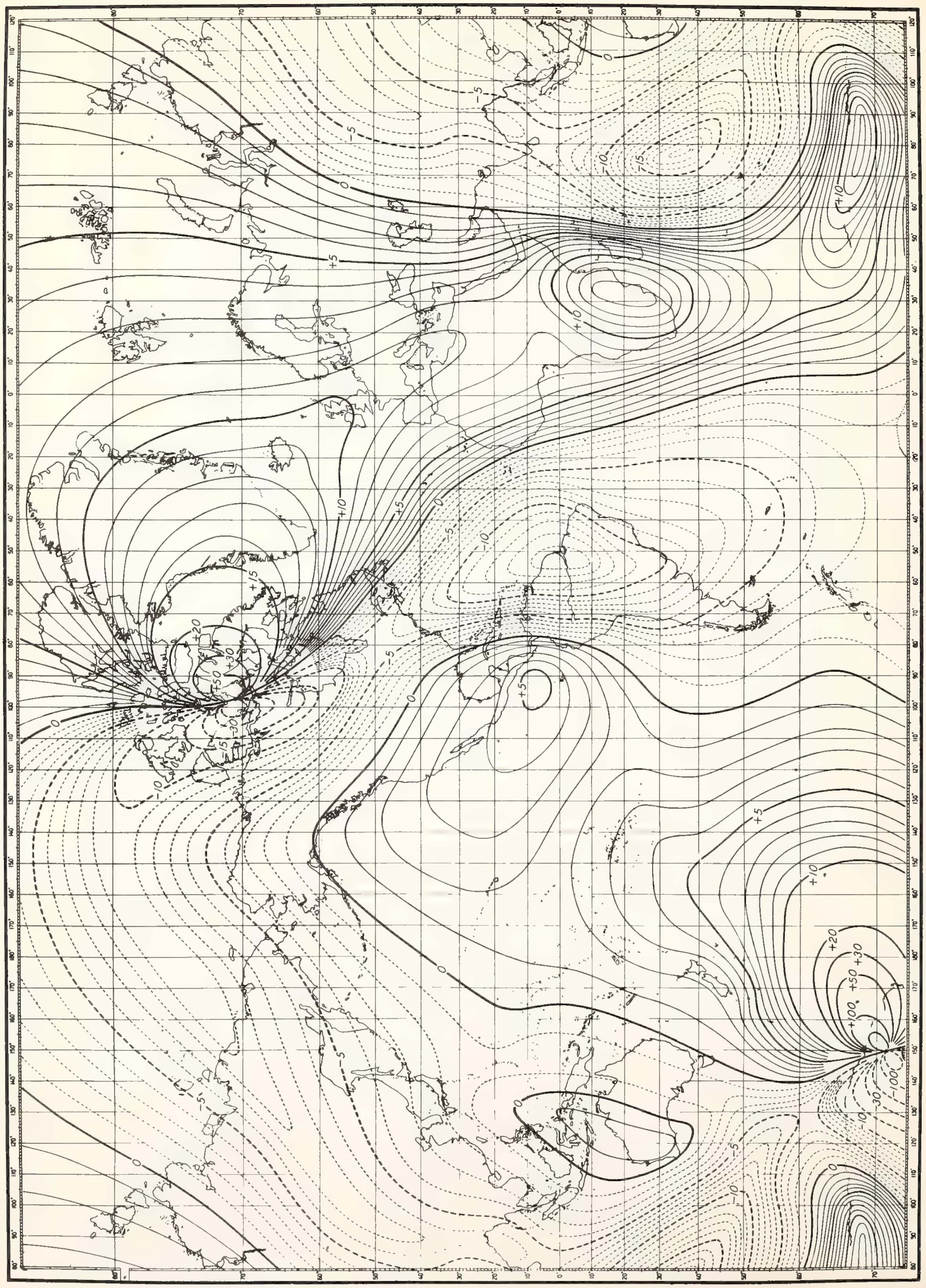

FIG. 116(A)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1912.5

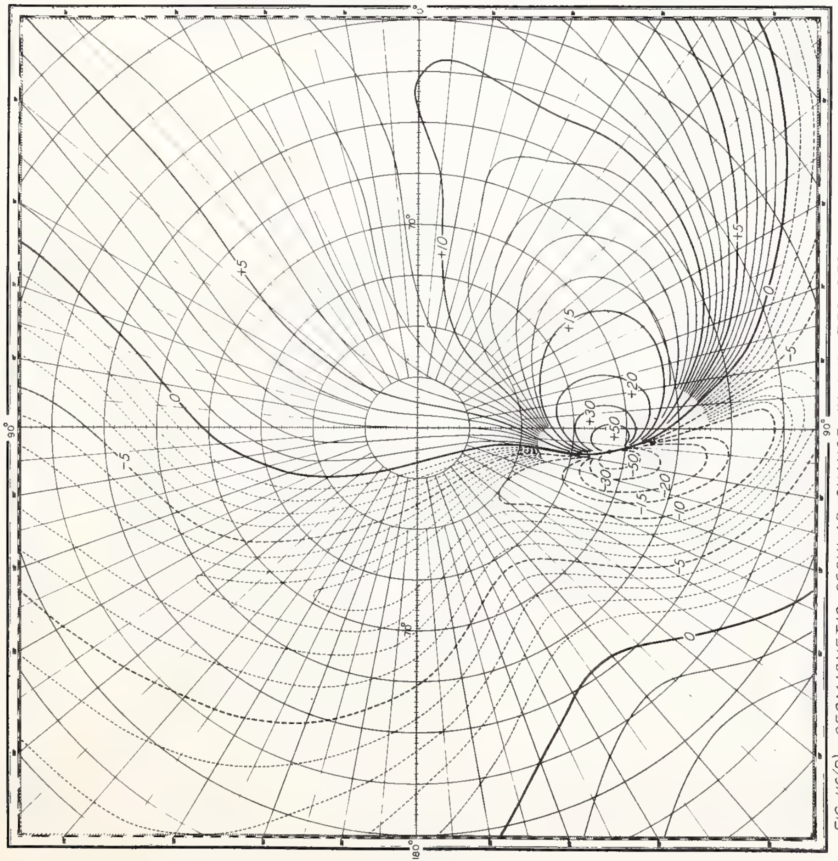

FIG. 116(B)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1912.5, NORTH POLAR REGION

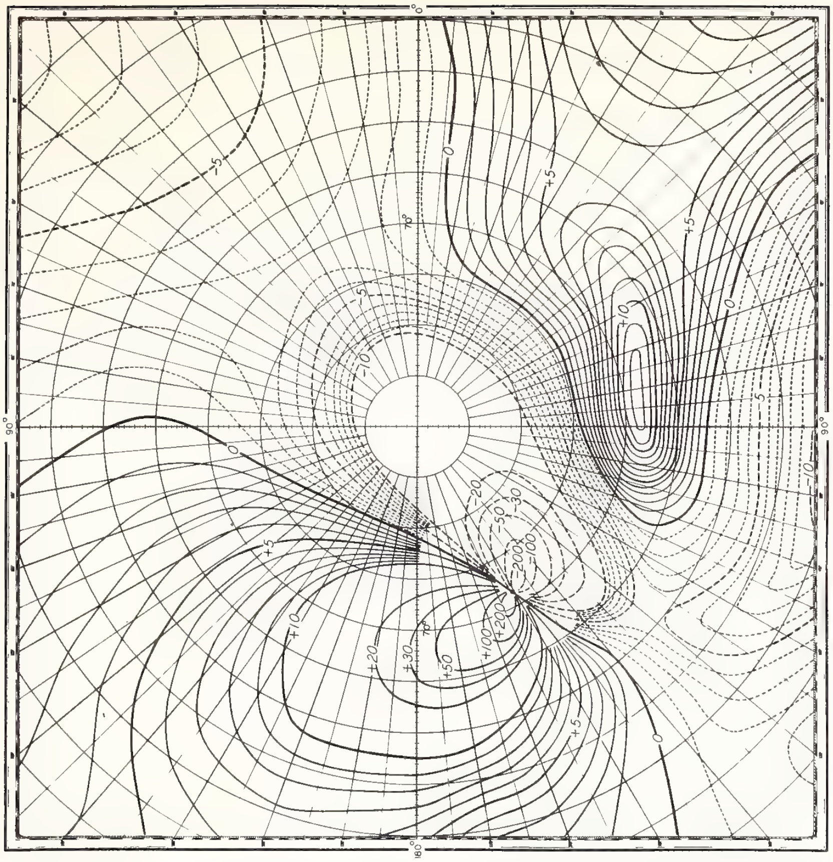

FIG. 116(C)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1912.5, SOUTH POLAR REGION

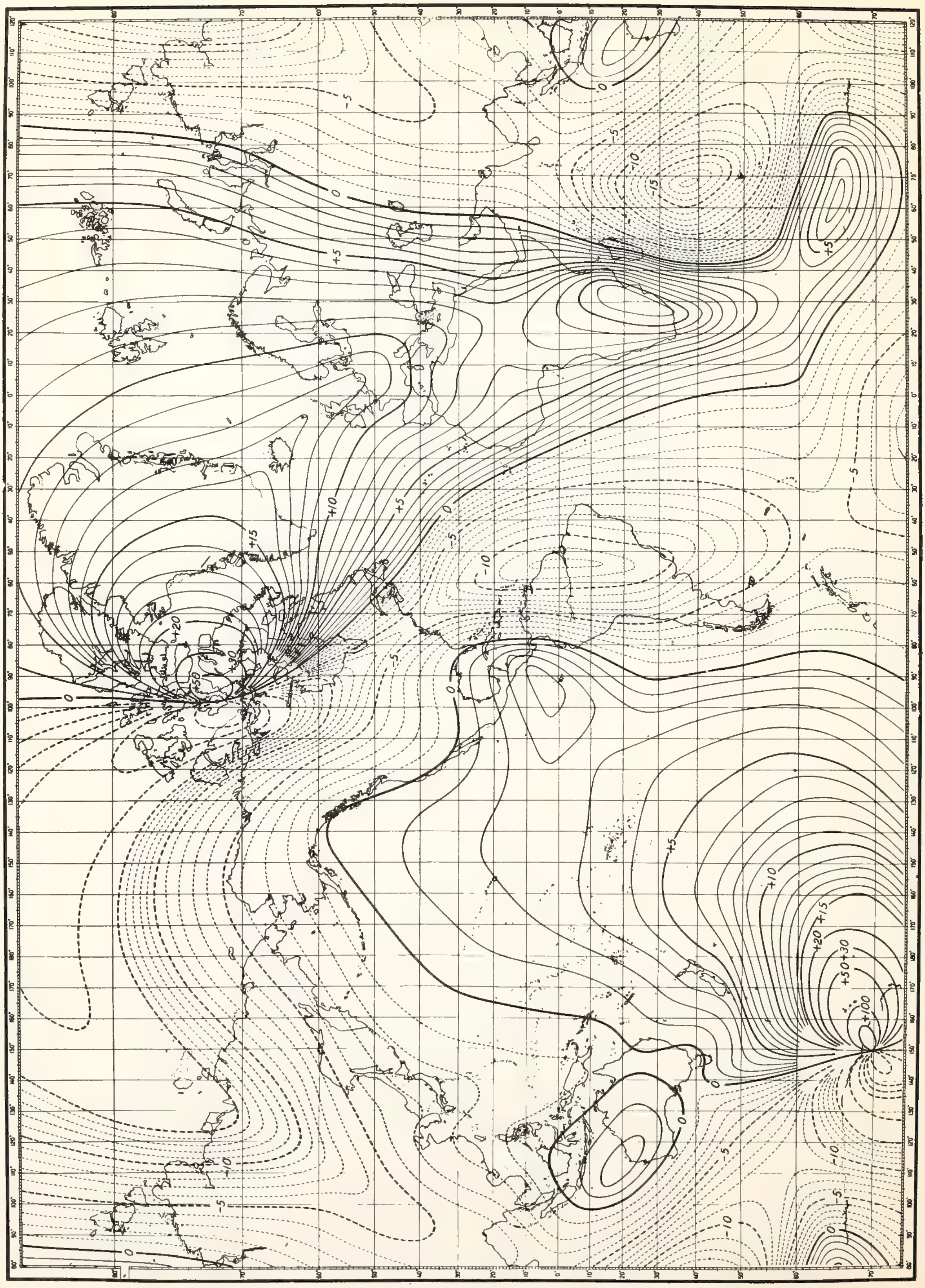

FIG. 117(A)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1922.5

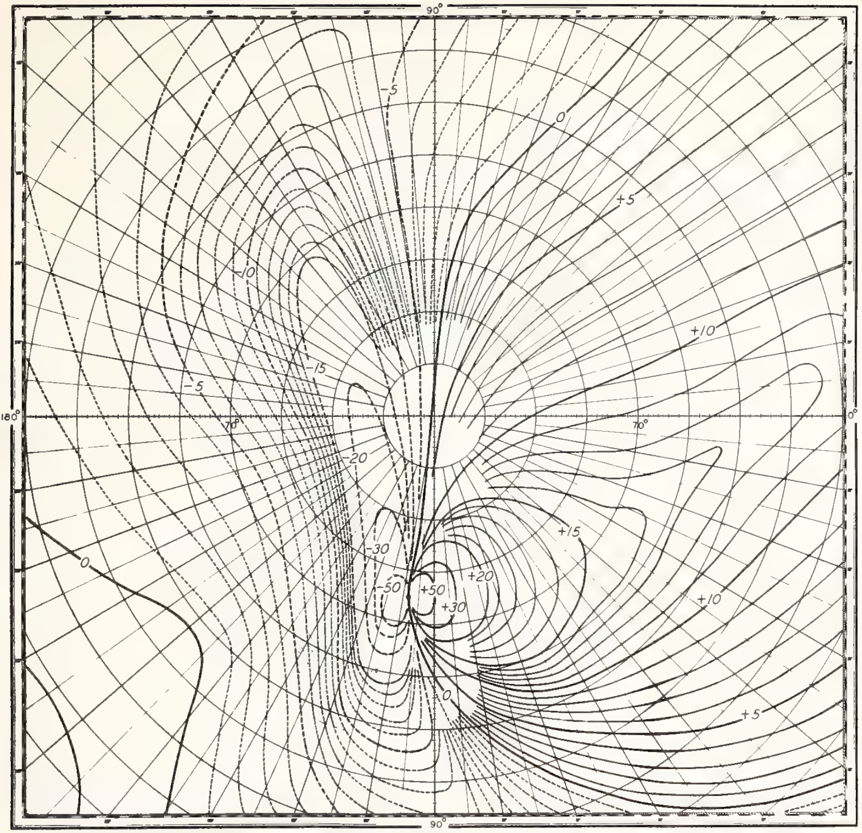

FIG. 117(B)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1922.5, NORTH POLAR REGION

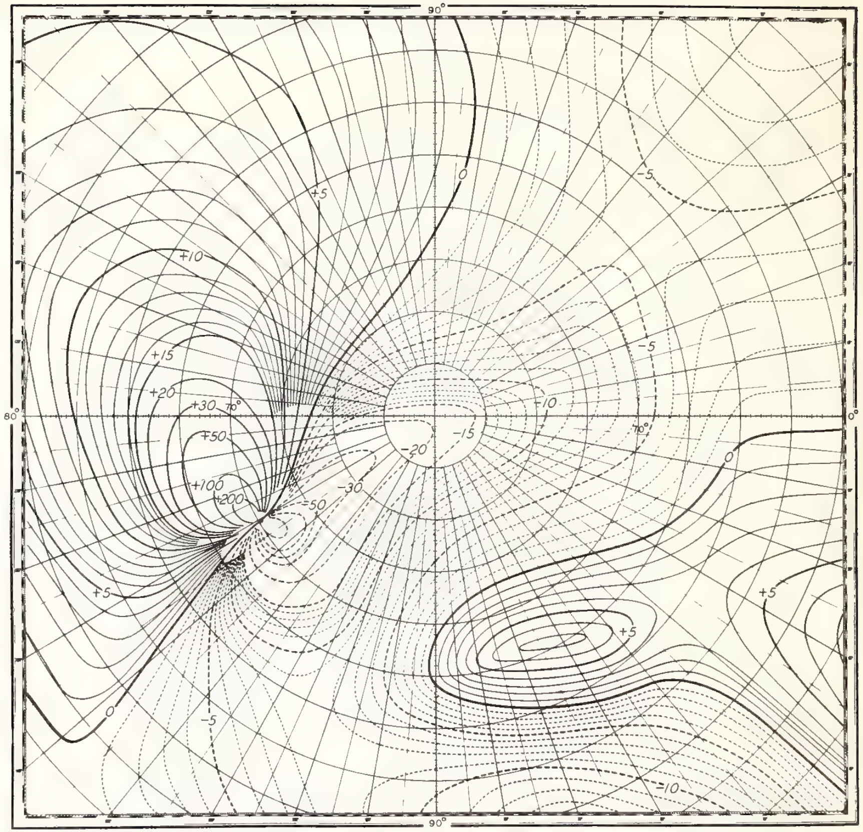

FIG. 117(C)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1922.5, SOUTH POLAR REGION

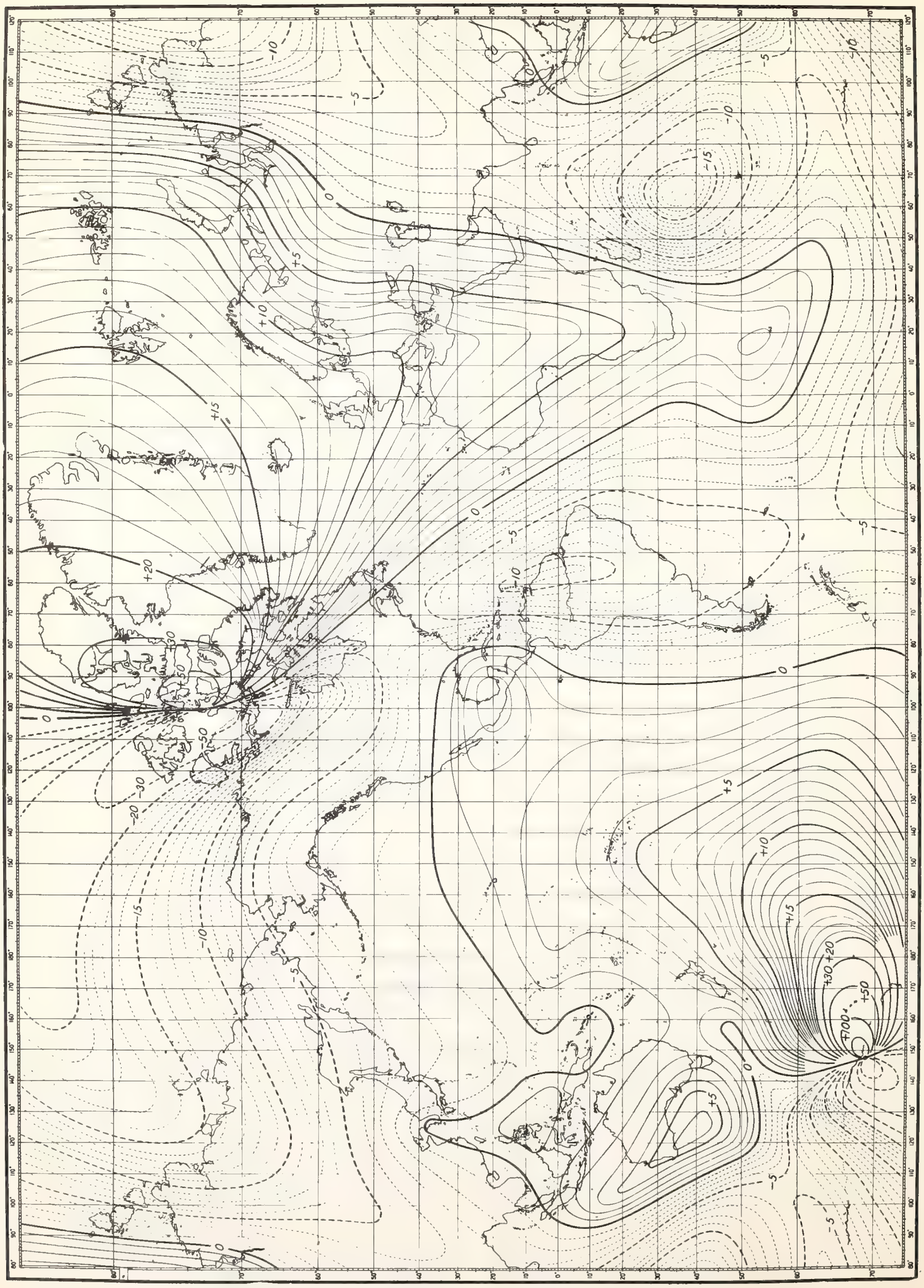

FIG. 118(A) — GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1932.5

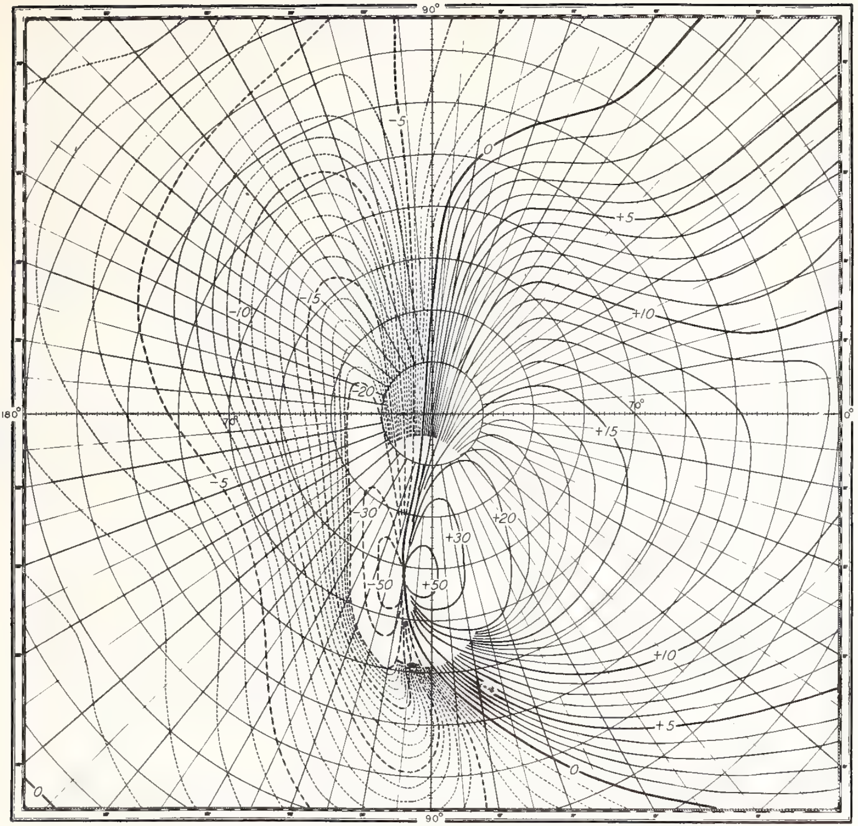

FIG. 118(B)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1932.5, NORTH POLAR REGION

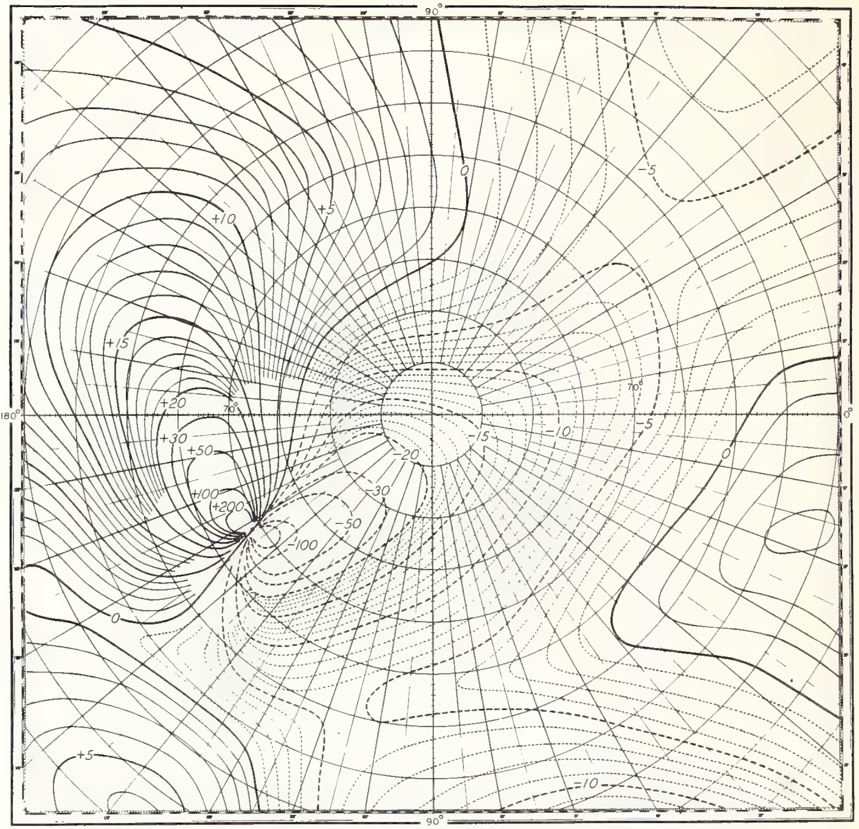

FIG. 118(C)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1932.5, SOUTH POLAR REGION

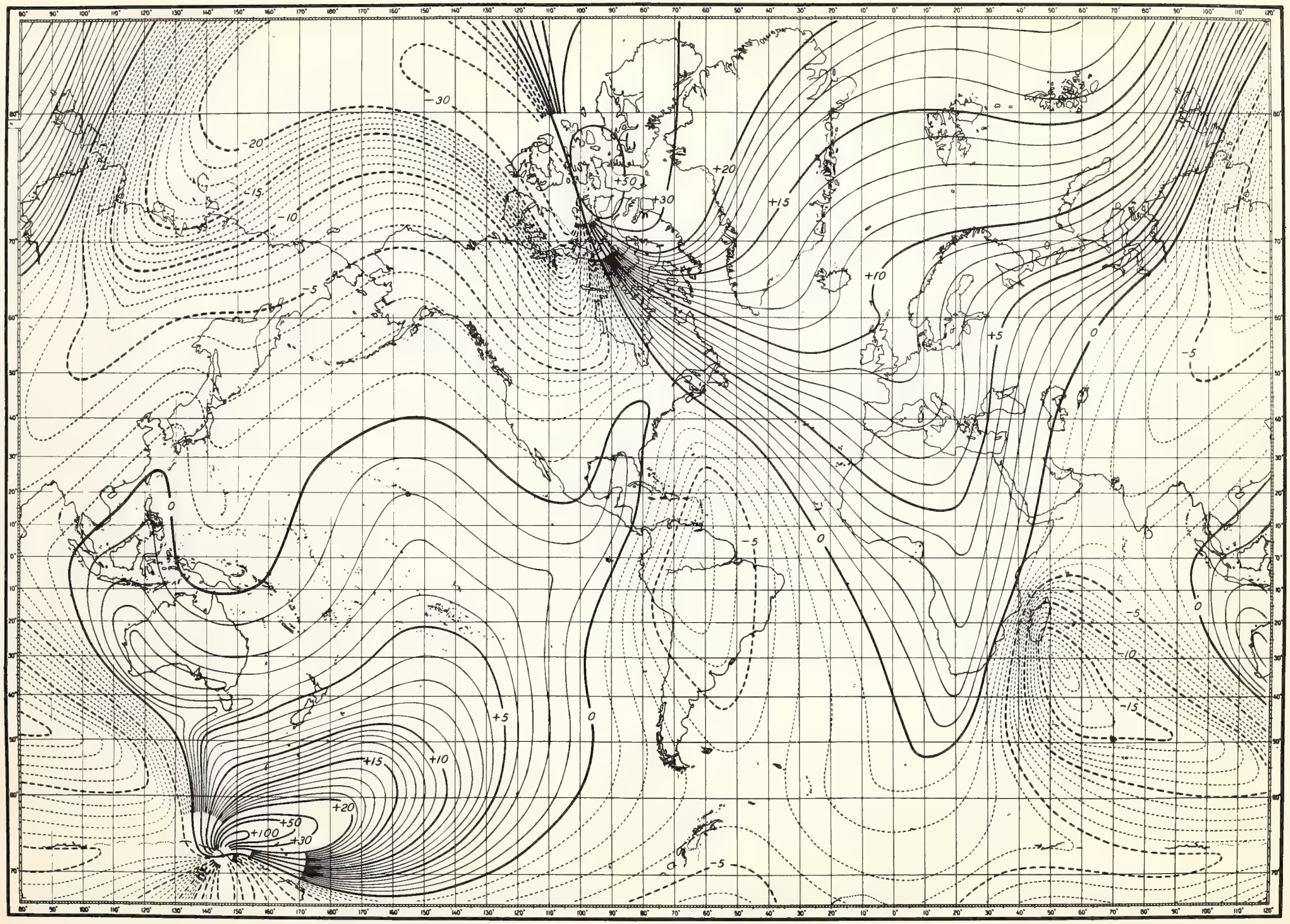

FIG. 119(A)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1942.5

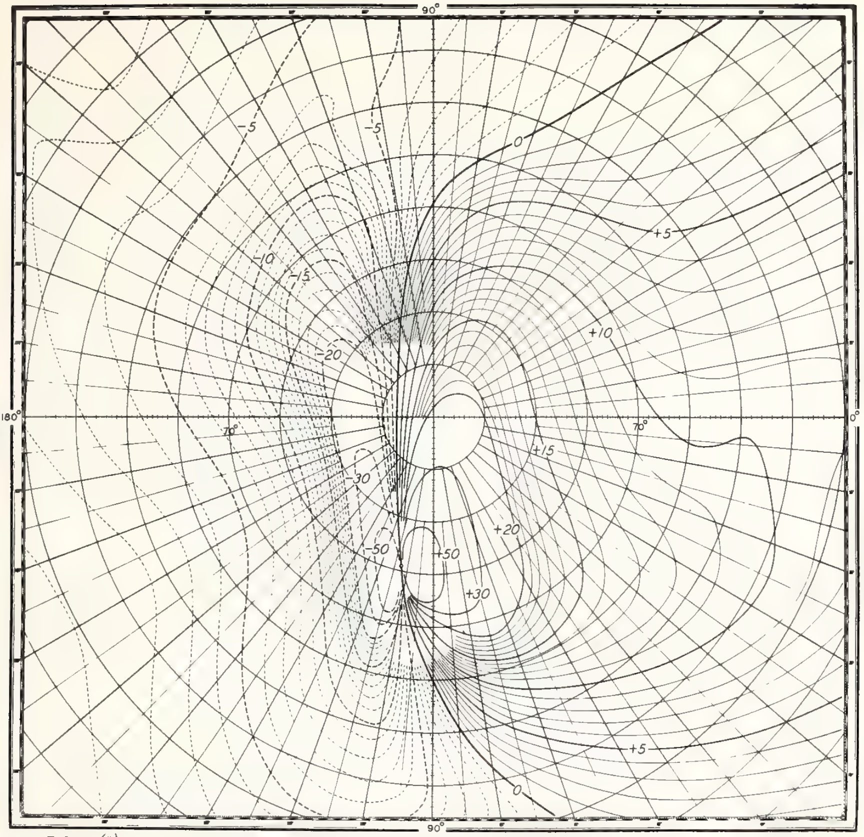

FIG. 119(B)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, DECLINATION, EPOCH 1942.5, NORTH POLAR REGION

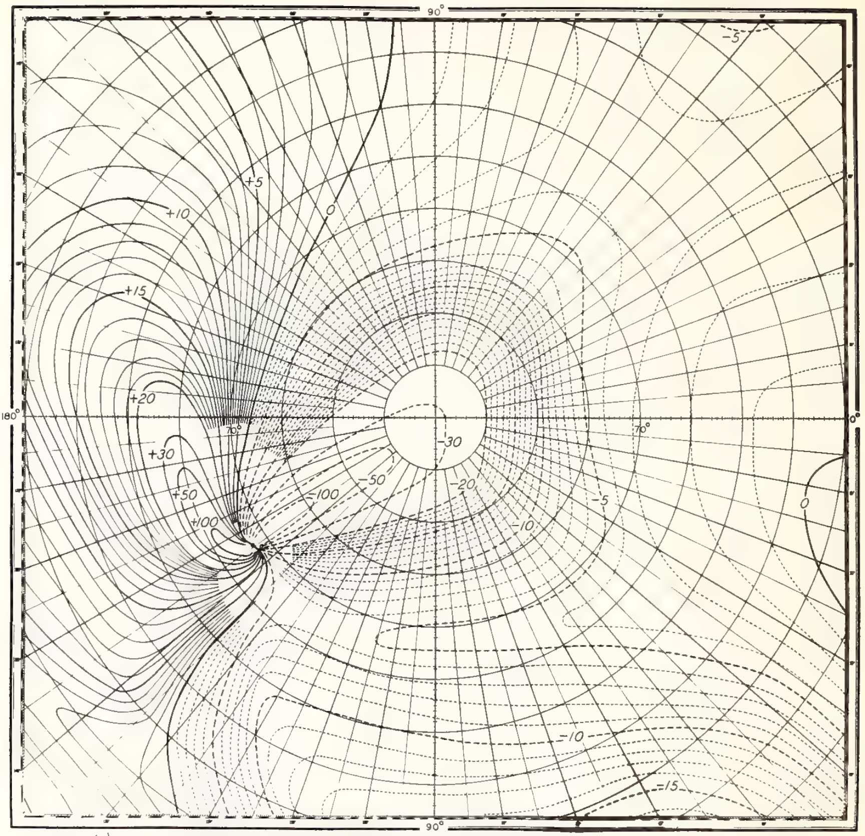

FIG. 119(C)—GEOMAGNETIC SECULAR CHANGE IN **MINUTES PER YEAR**, DECLINATION, EPOCH 1942.5, SOUTH **POLAR REGION**

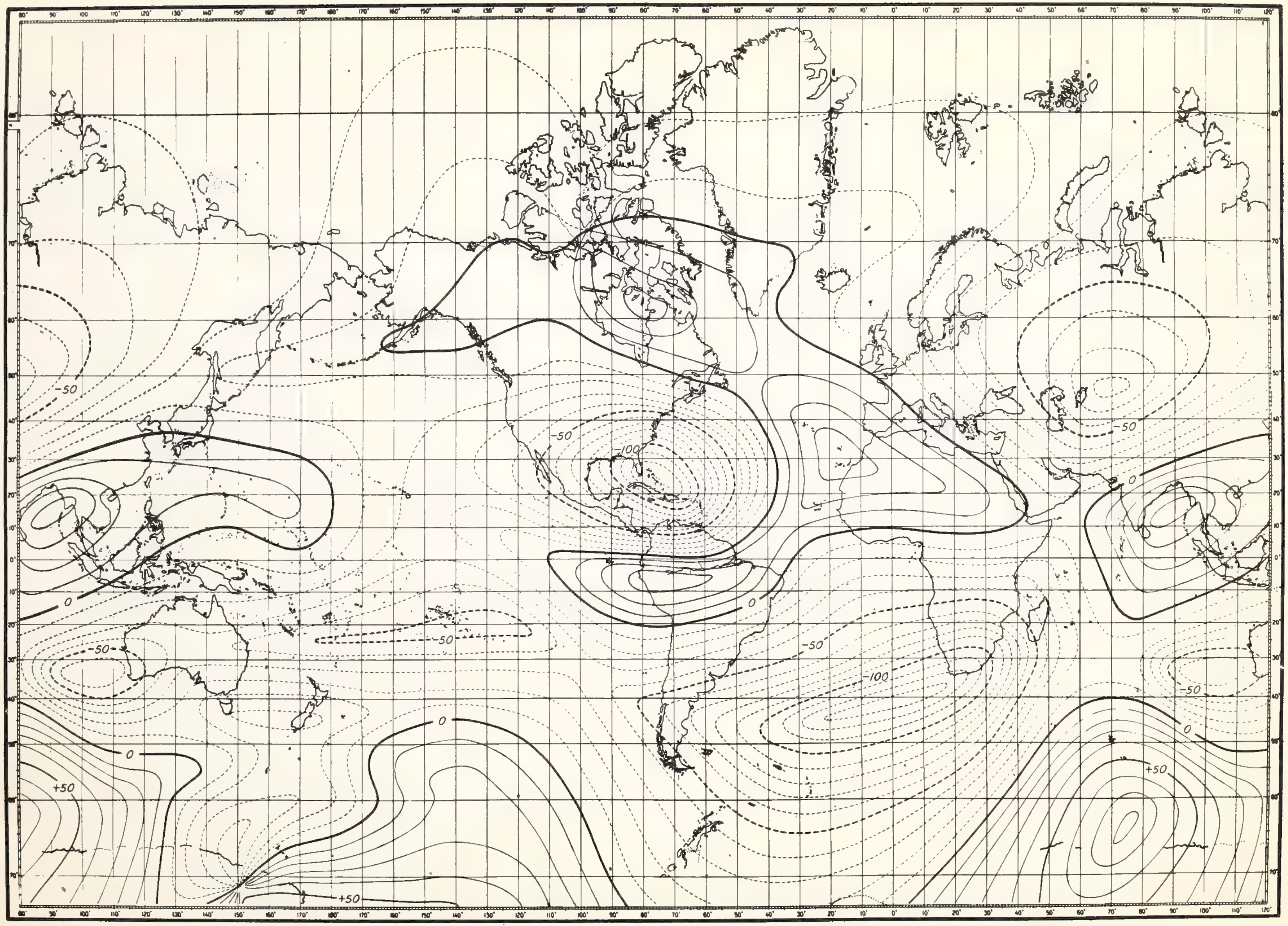

FIG. 120(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1912.5

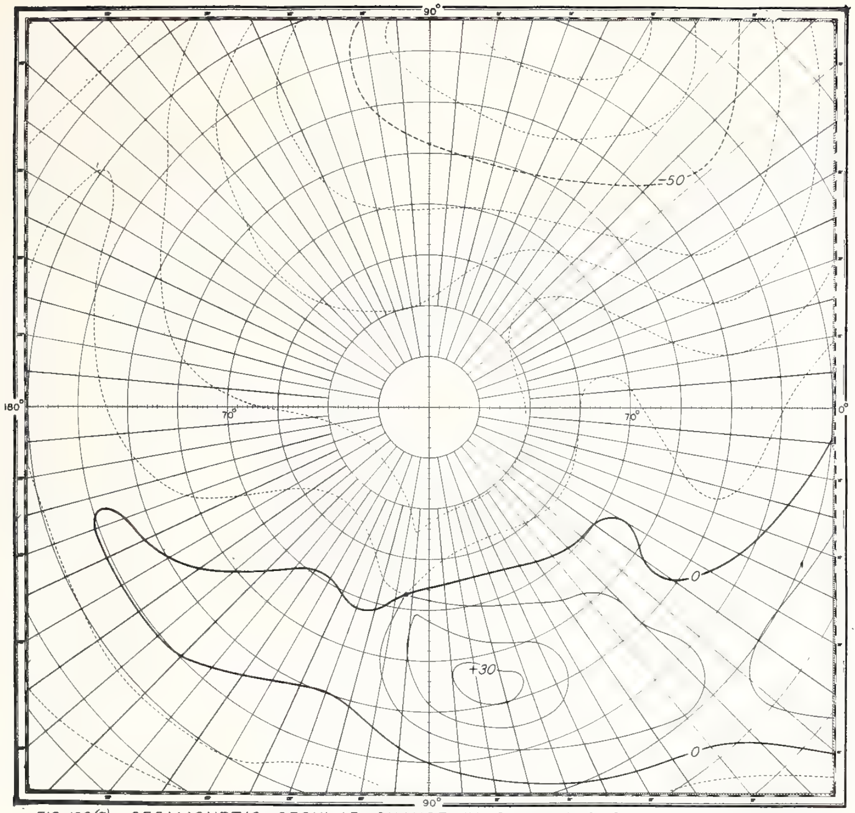

FIG. 120(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1912.5, NORTH POLAR REGION

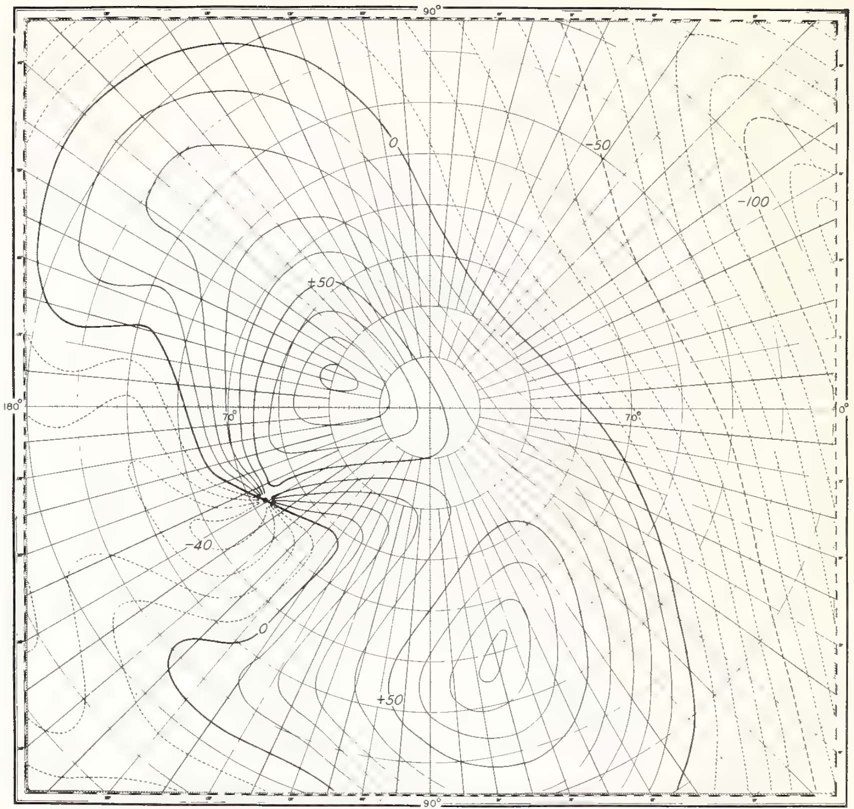

FIG. 120(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1912.5, SOUTH POLAR REGION

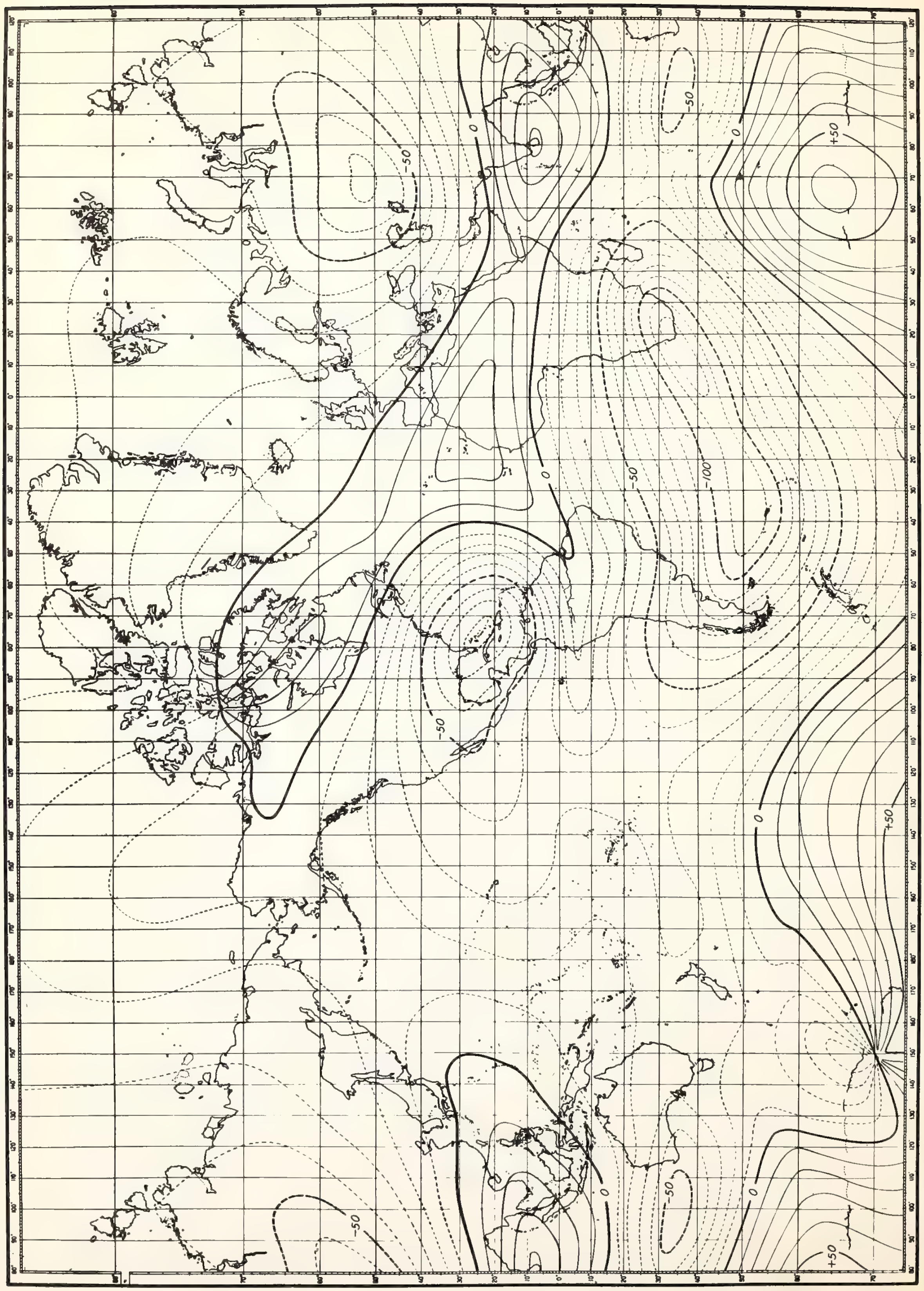

FIG. 121(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1922.5

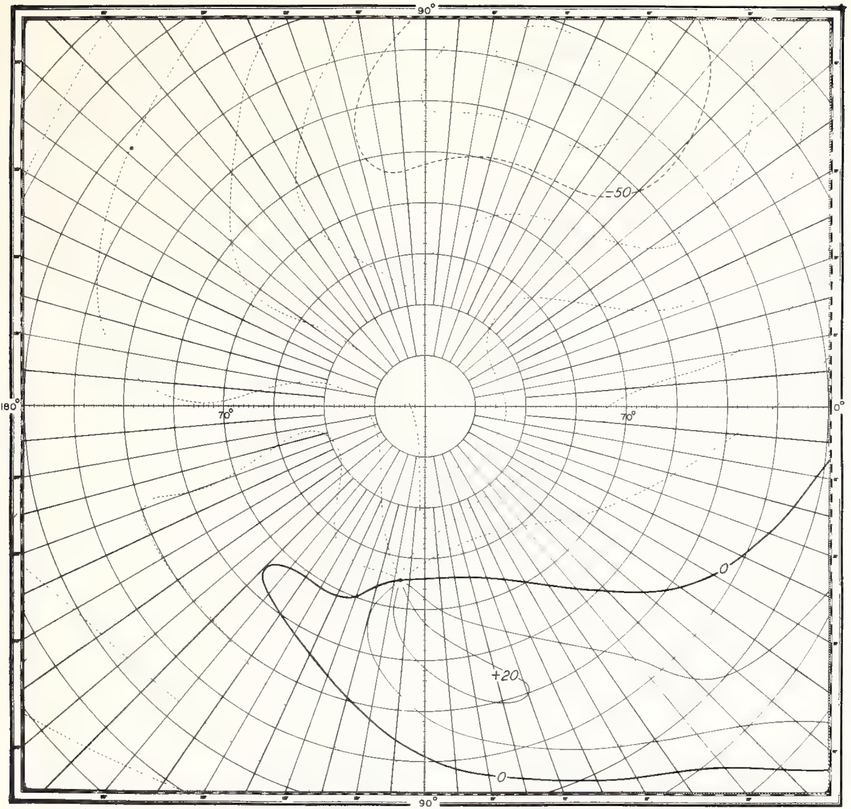

FIG. 121(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1922.5, NORTH POLAR REGION

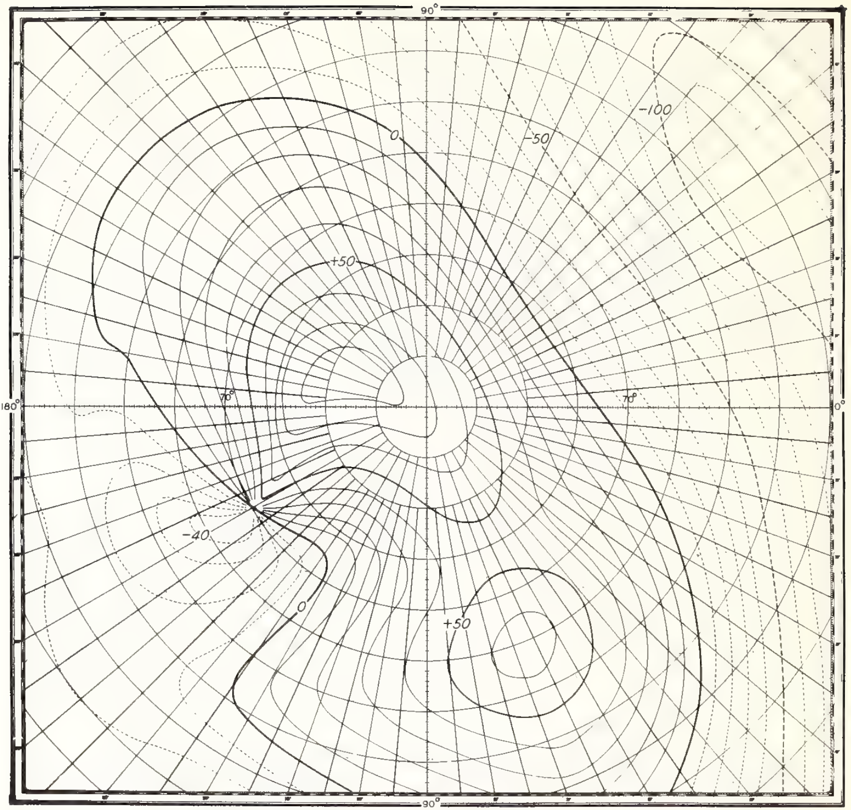

FIG. 121(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1922.5, SOUTH POLAR REGION

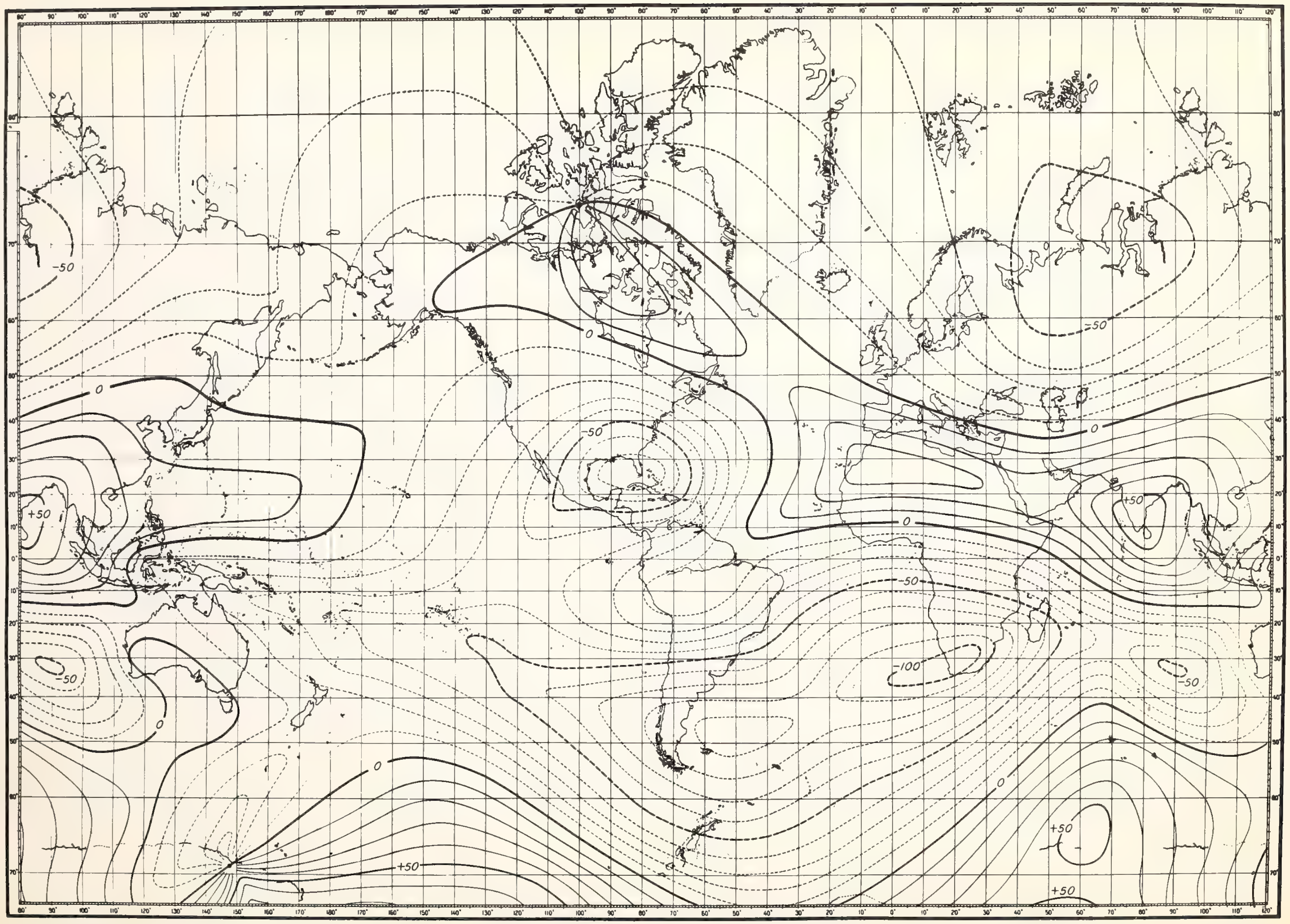

FIG. 122(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1932.5

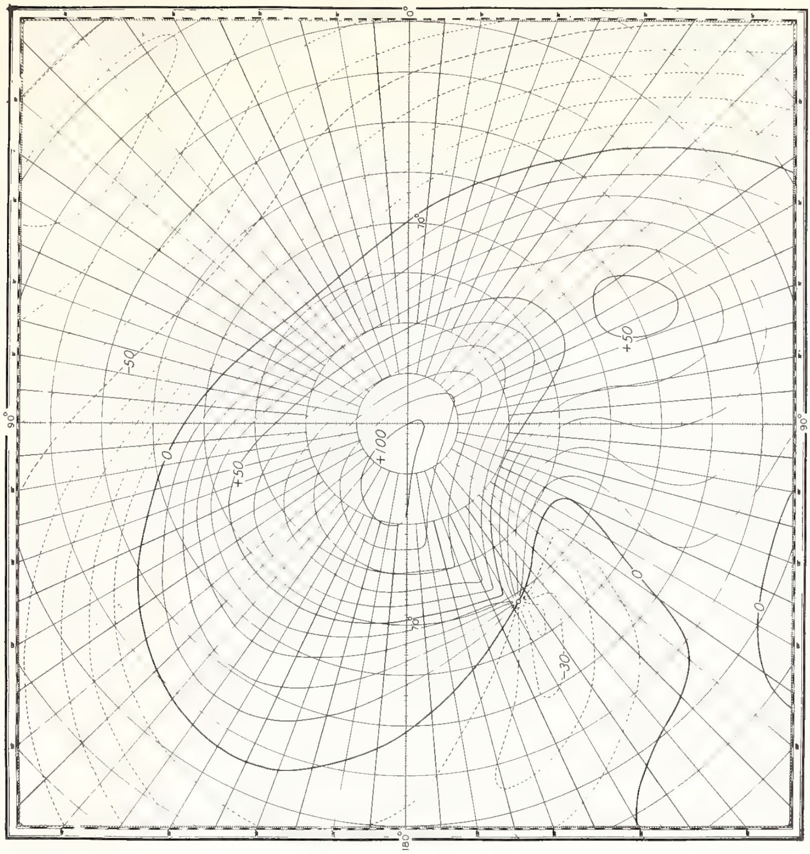

FIG. 122(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1932.5, SOUTH POLAR REGION

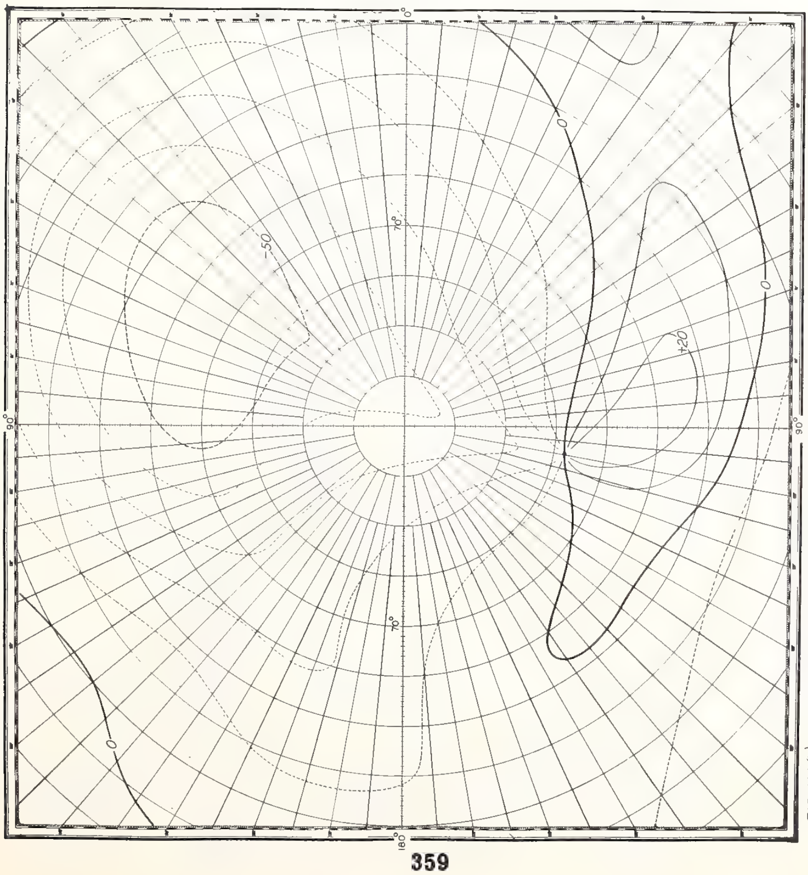

FIG. 122(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1932.5, NORTH POLAR REGION

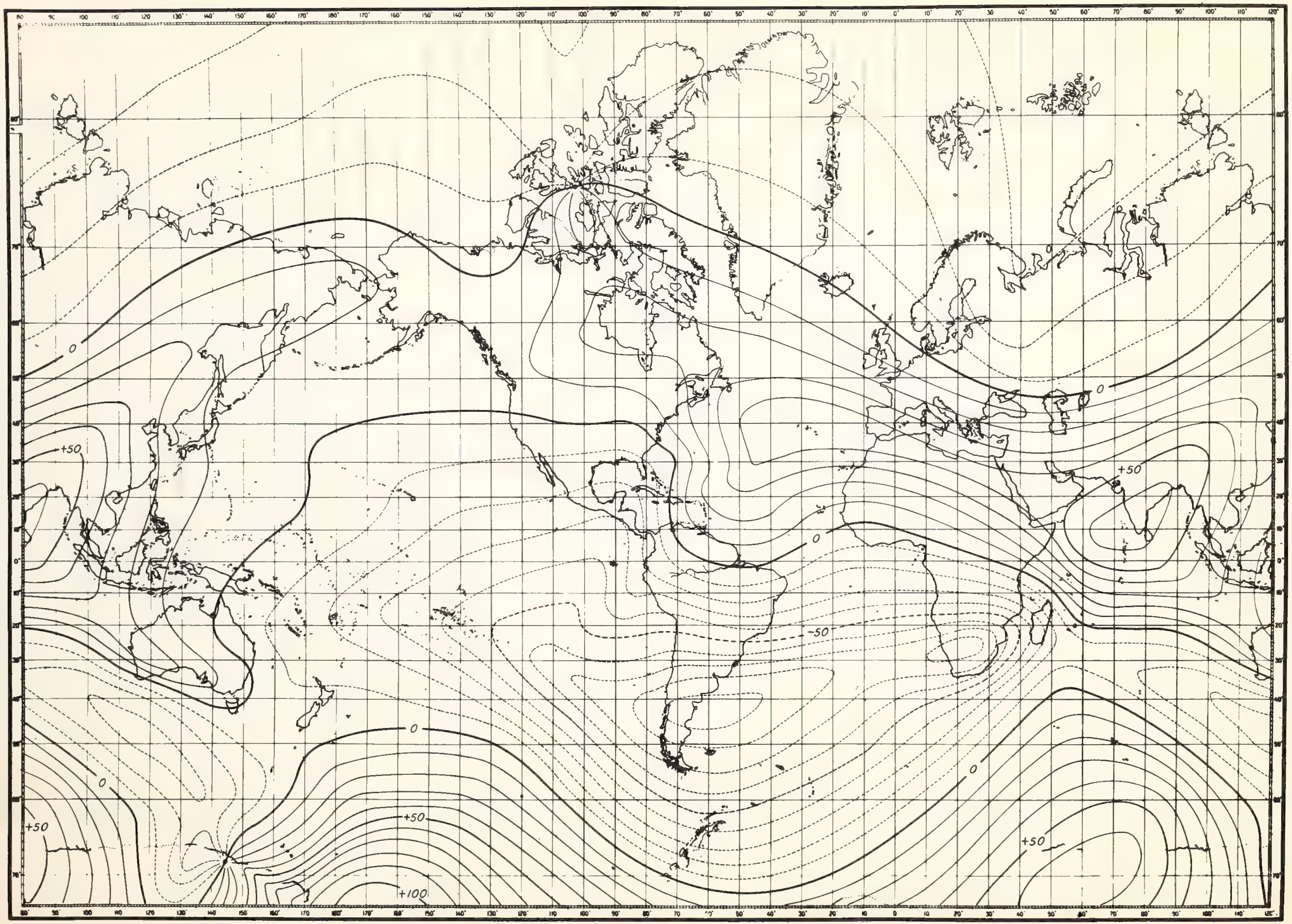

FIG. 123(A) —GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1942.5

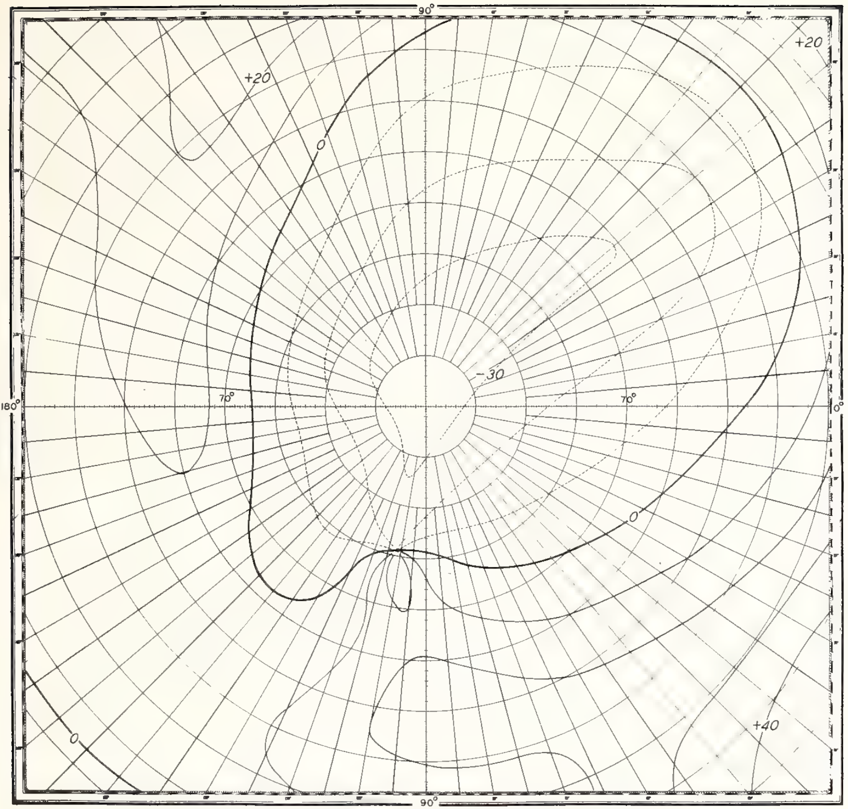

FIG. 123(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1942.5, NORTH POLAR REGION

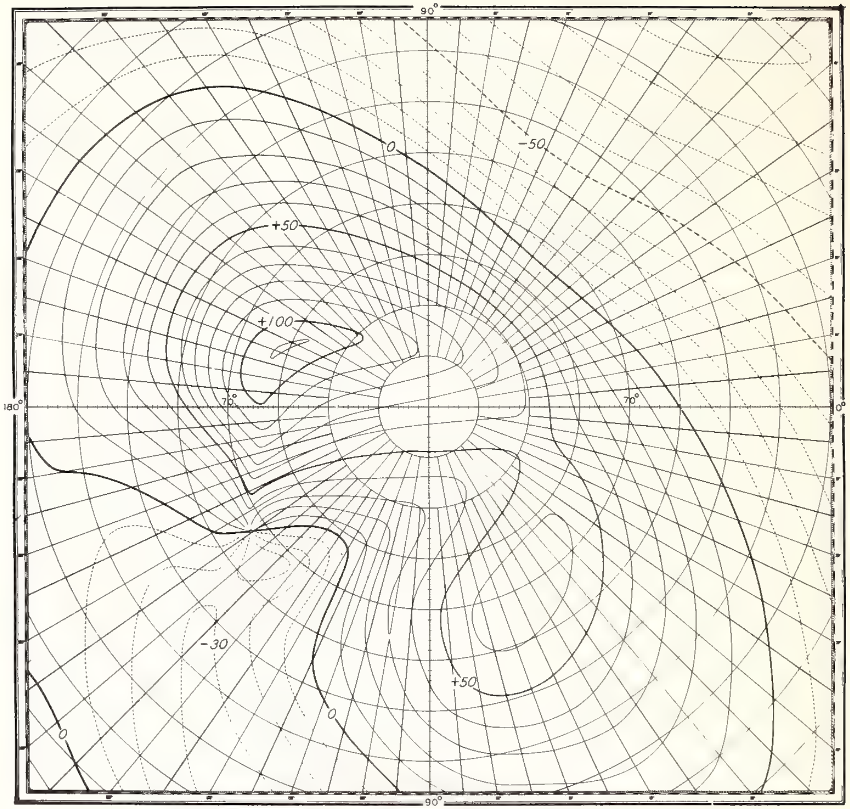

FIG. 123(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, HORIZONTAL INTENSITY, EPOCH 1942.5, SOUTH POLAR REGION

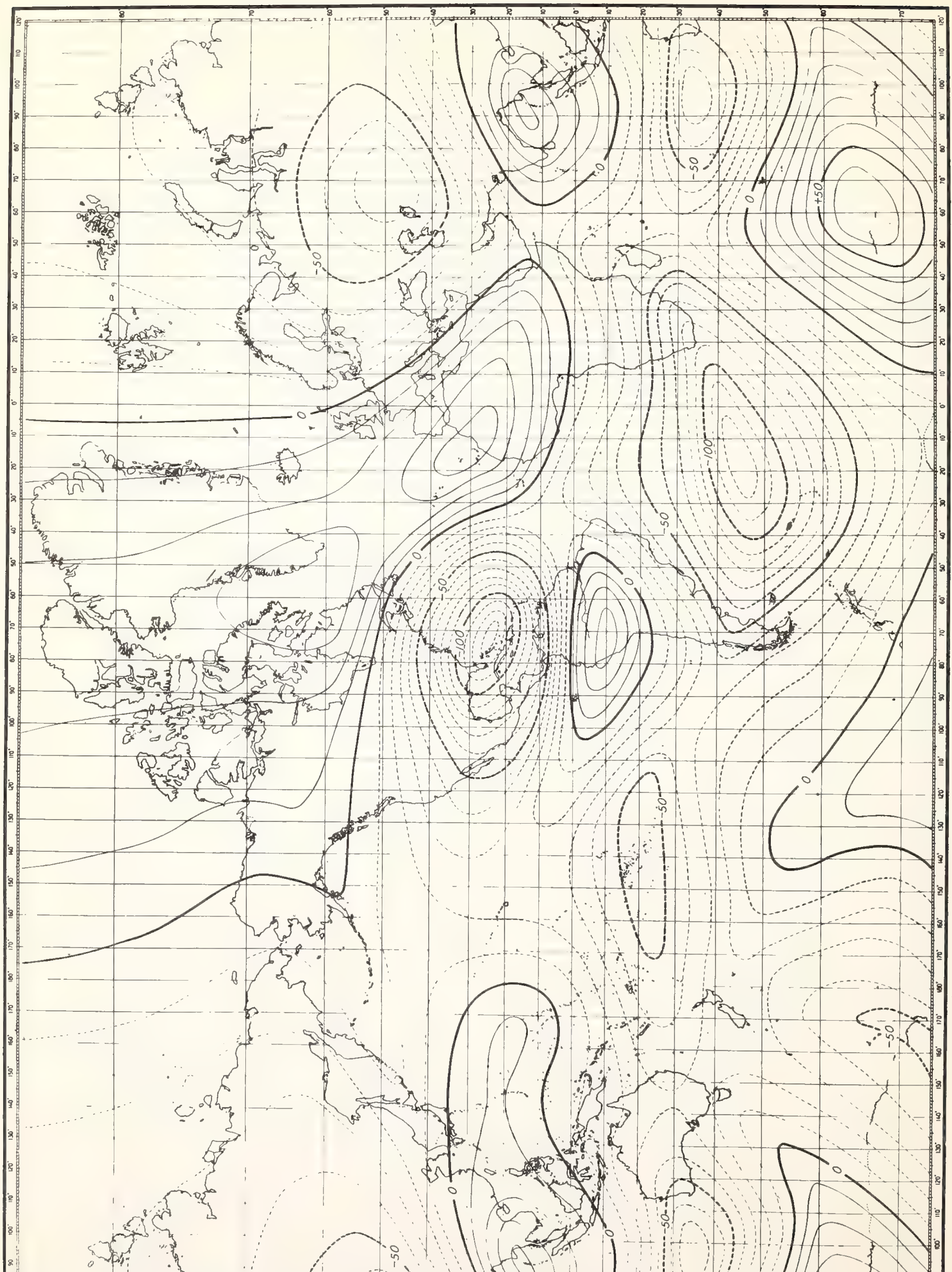

FIG. 124(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1912.5

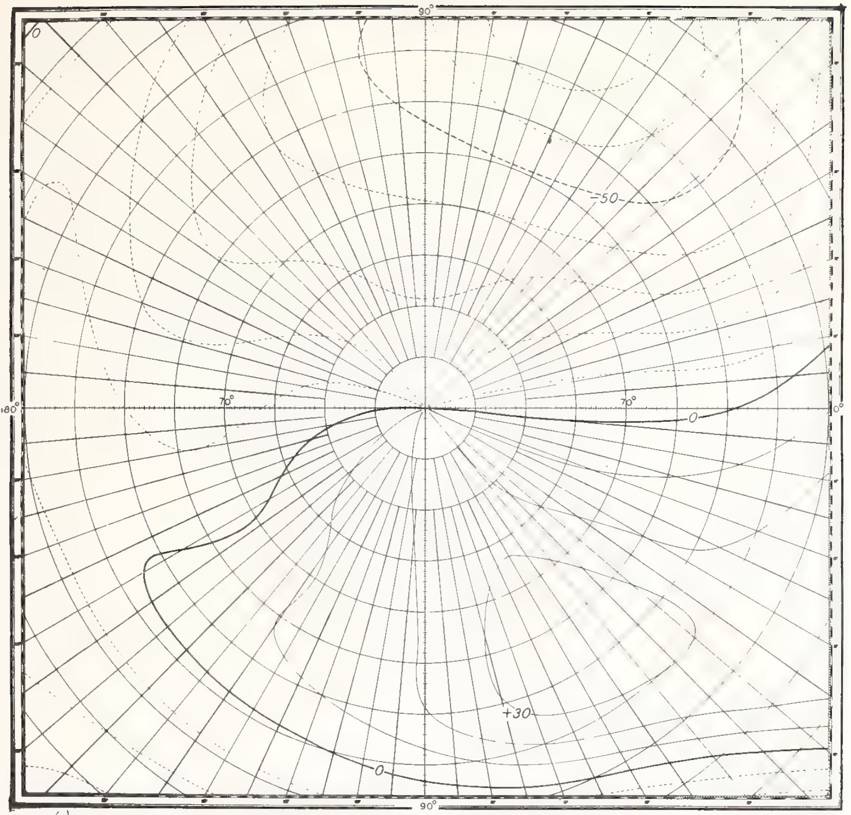

FIG. 124(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1912.5, NORTH POLAR REGION

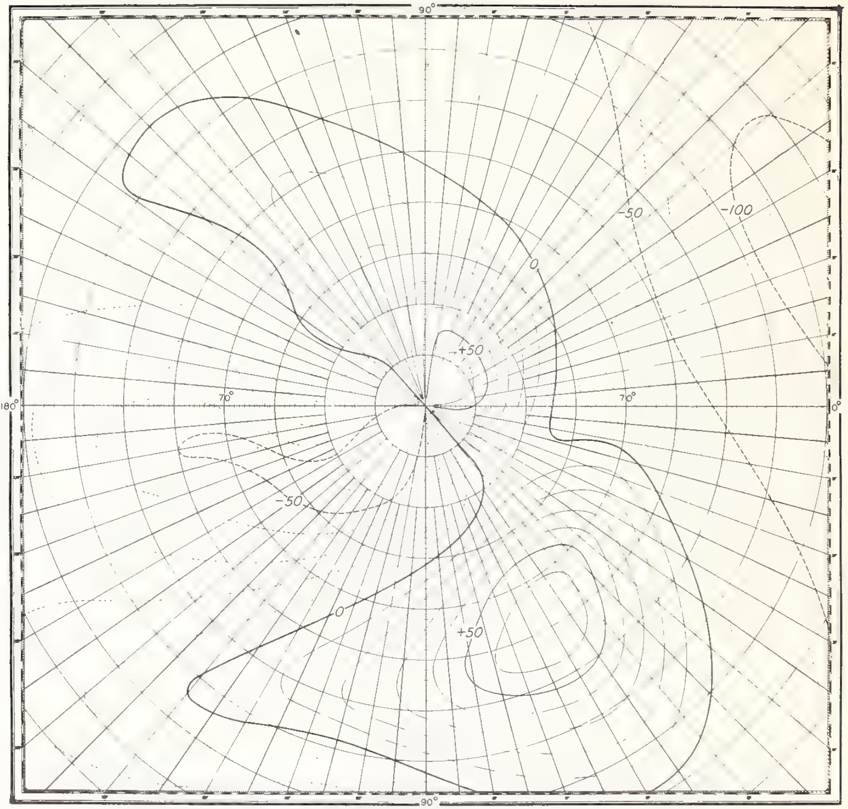

FIG 124(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1912.5, SOUTH POLAR REGION

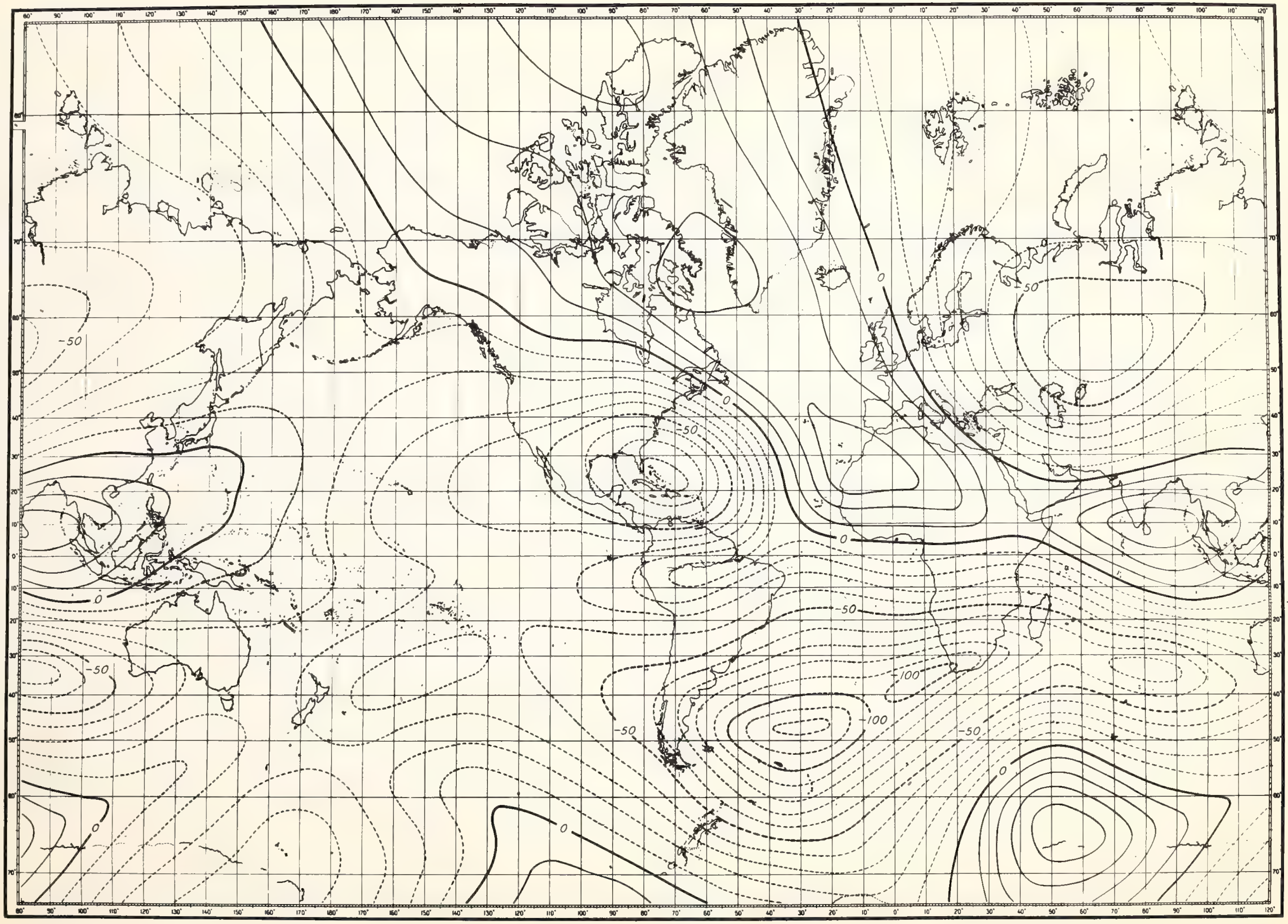

FIG. 125(A) — GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1922.5

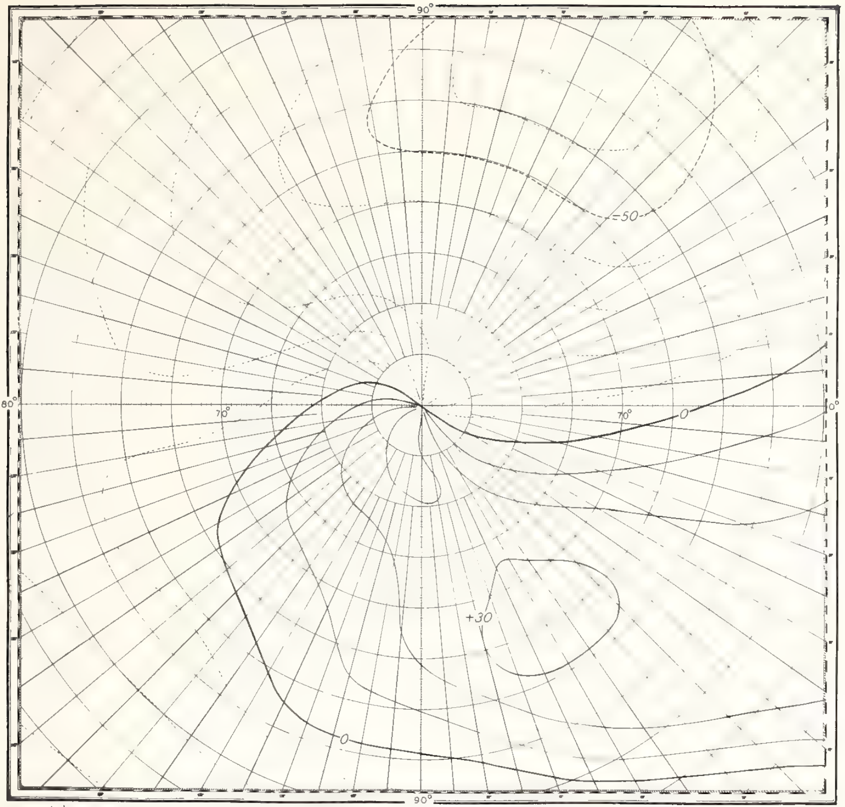

FIG 125(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1922.5, NORTH POLAR REGION

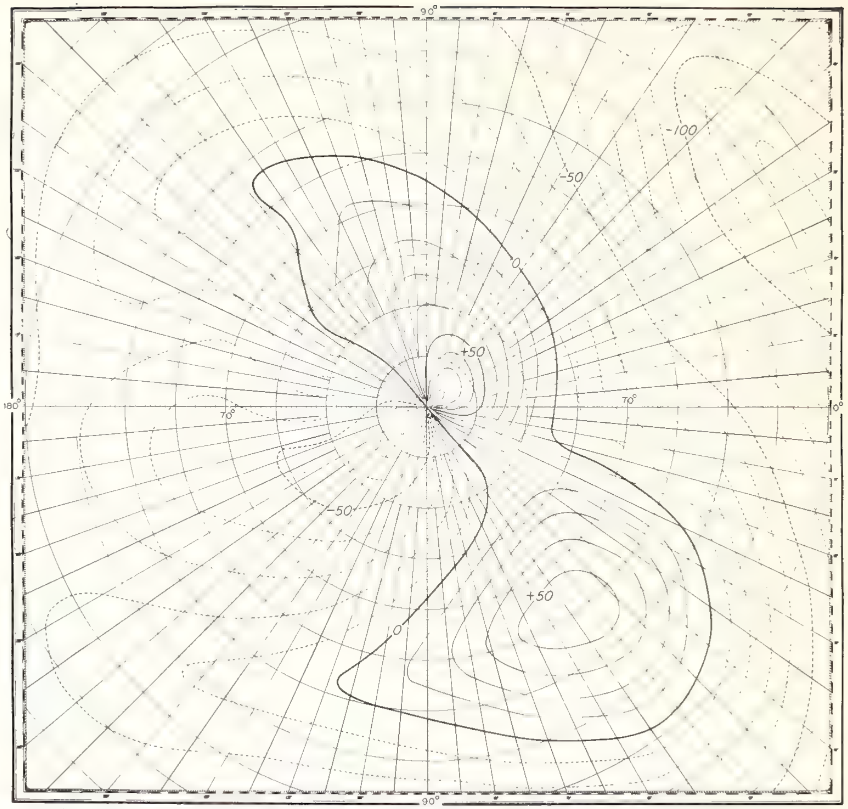

FIG 125(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1922.5, SOUTH POLAR REGION

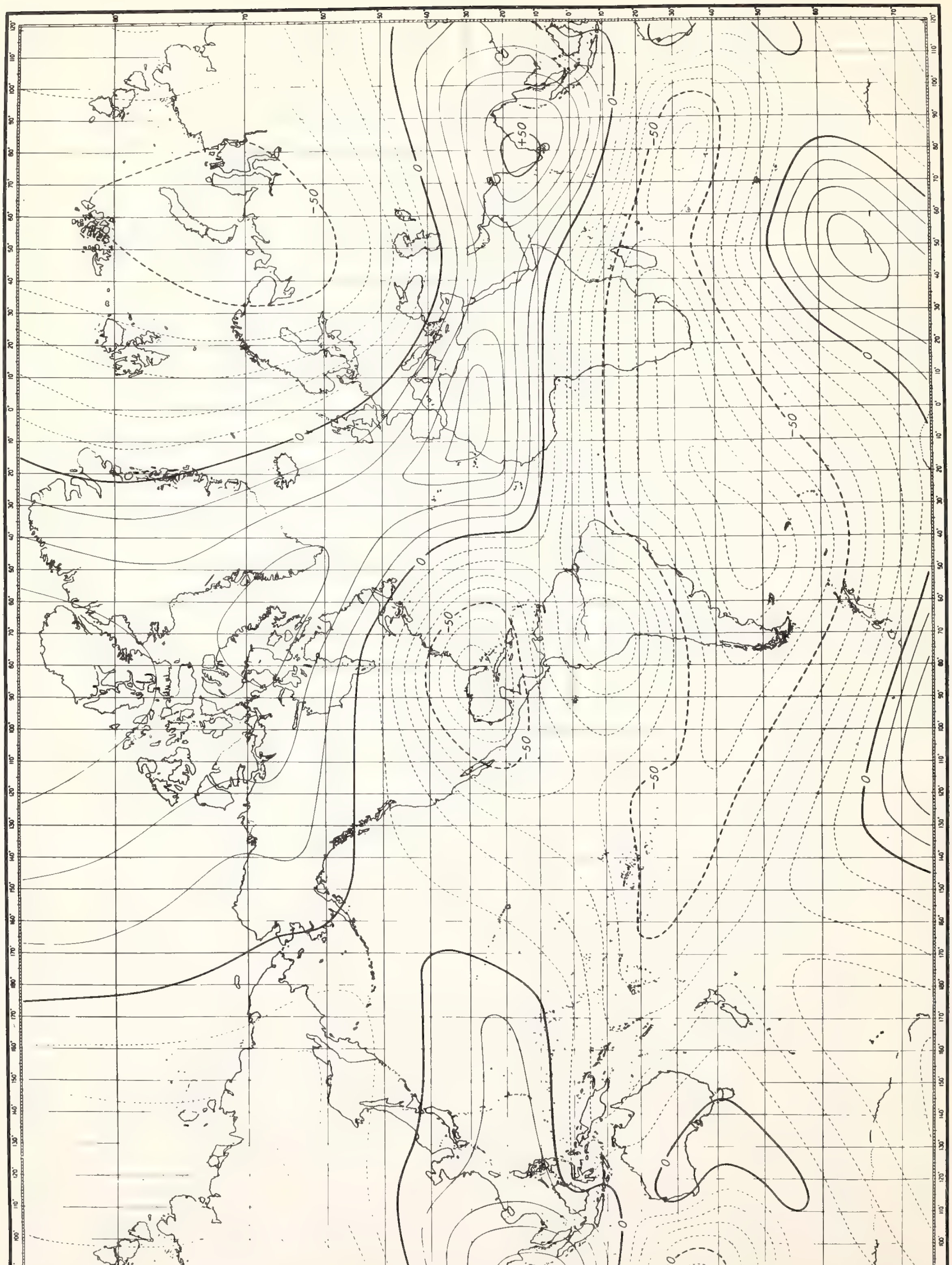

FIG. 126(A) —GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1932.5

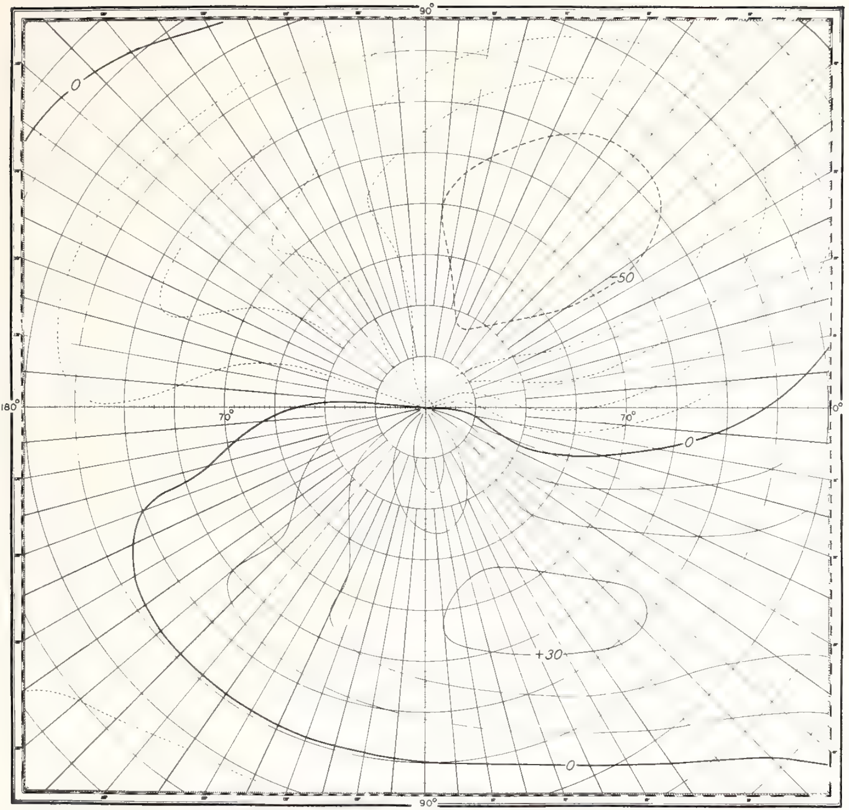

FIG. 126(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1932.5, NORTH POLAR REGION

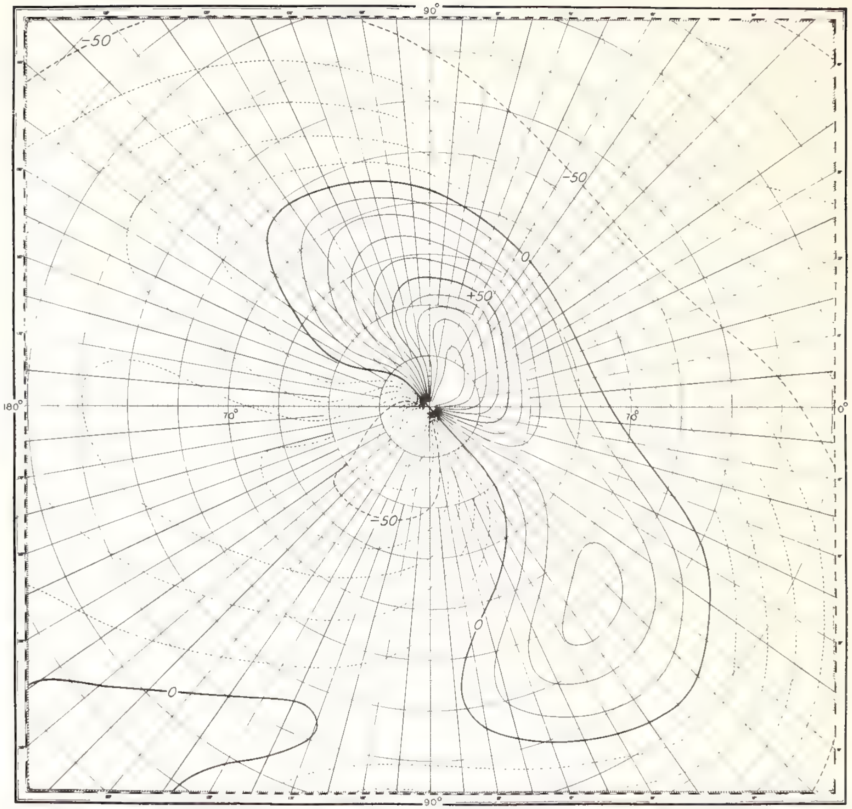

FIG. 126(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1932.5, SOUTH POLAR REGION

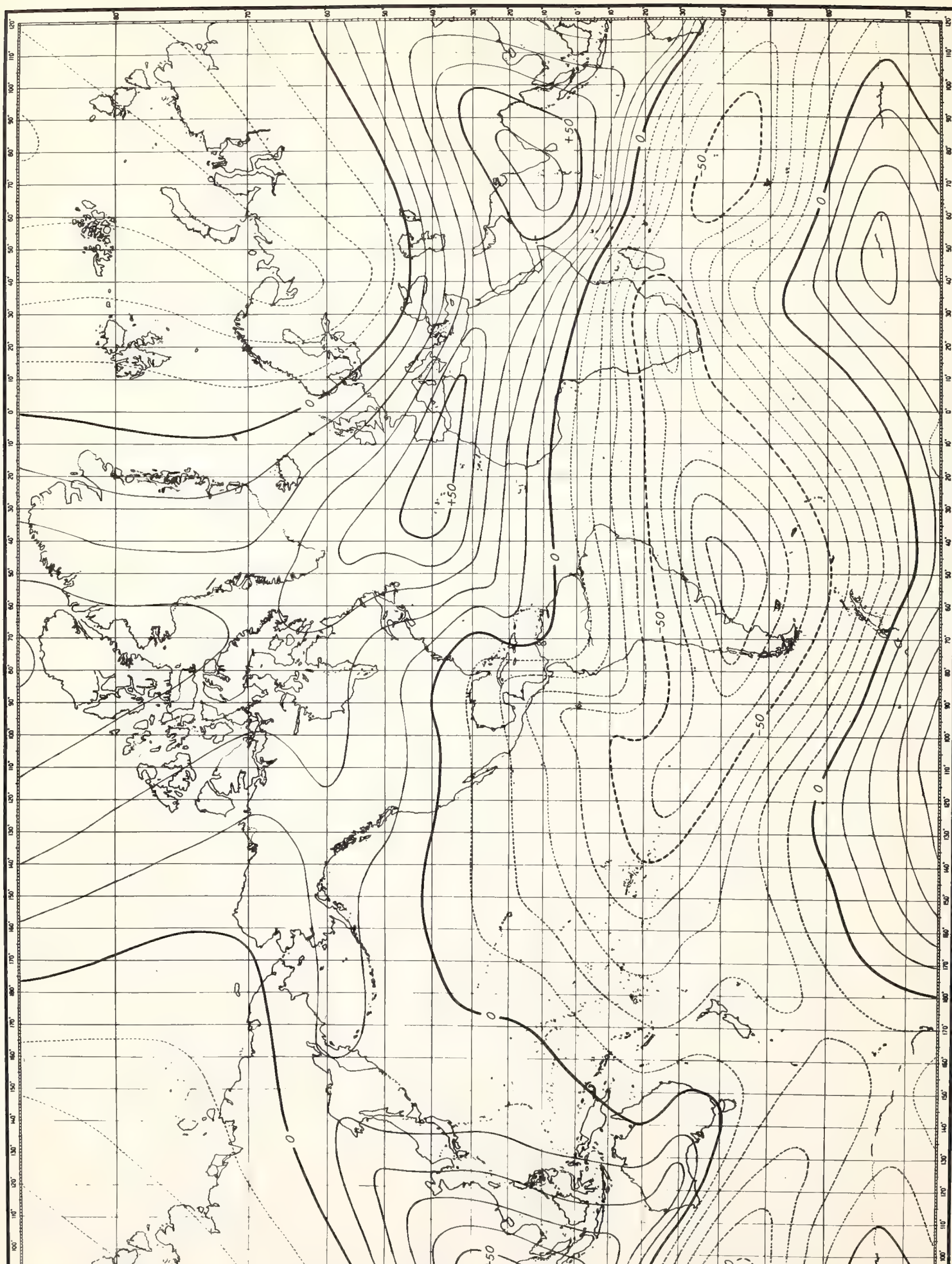

FIG. 127(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1942.5

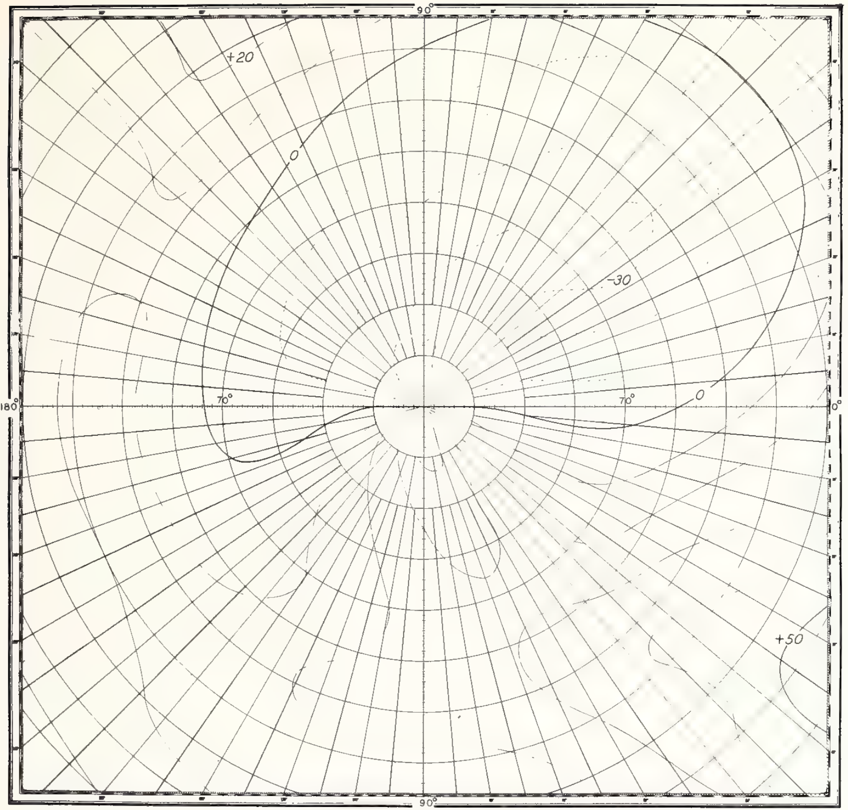

FIG. 127(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1942.5, NORTH POLAR REGION

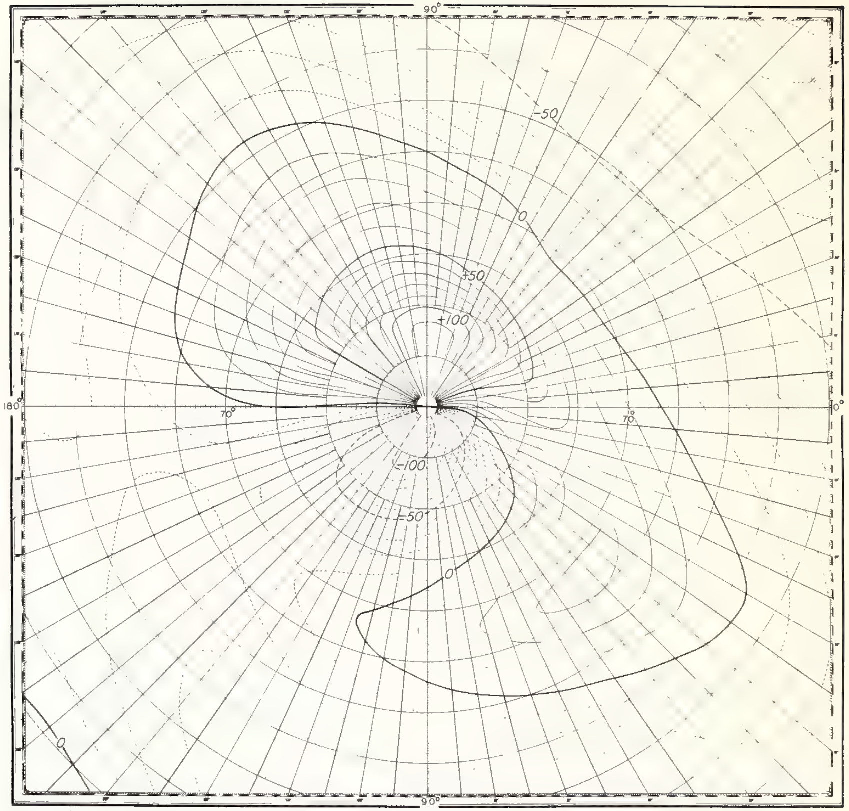

FIG 127(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, NORTH COMPONENT, EPOCH 1942.5, SOUTH POLAR REGION

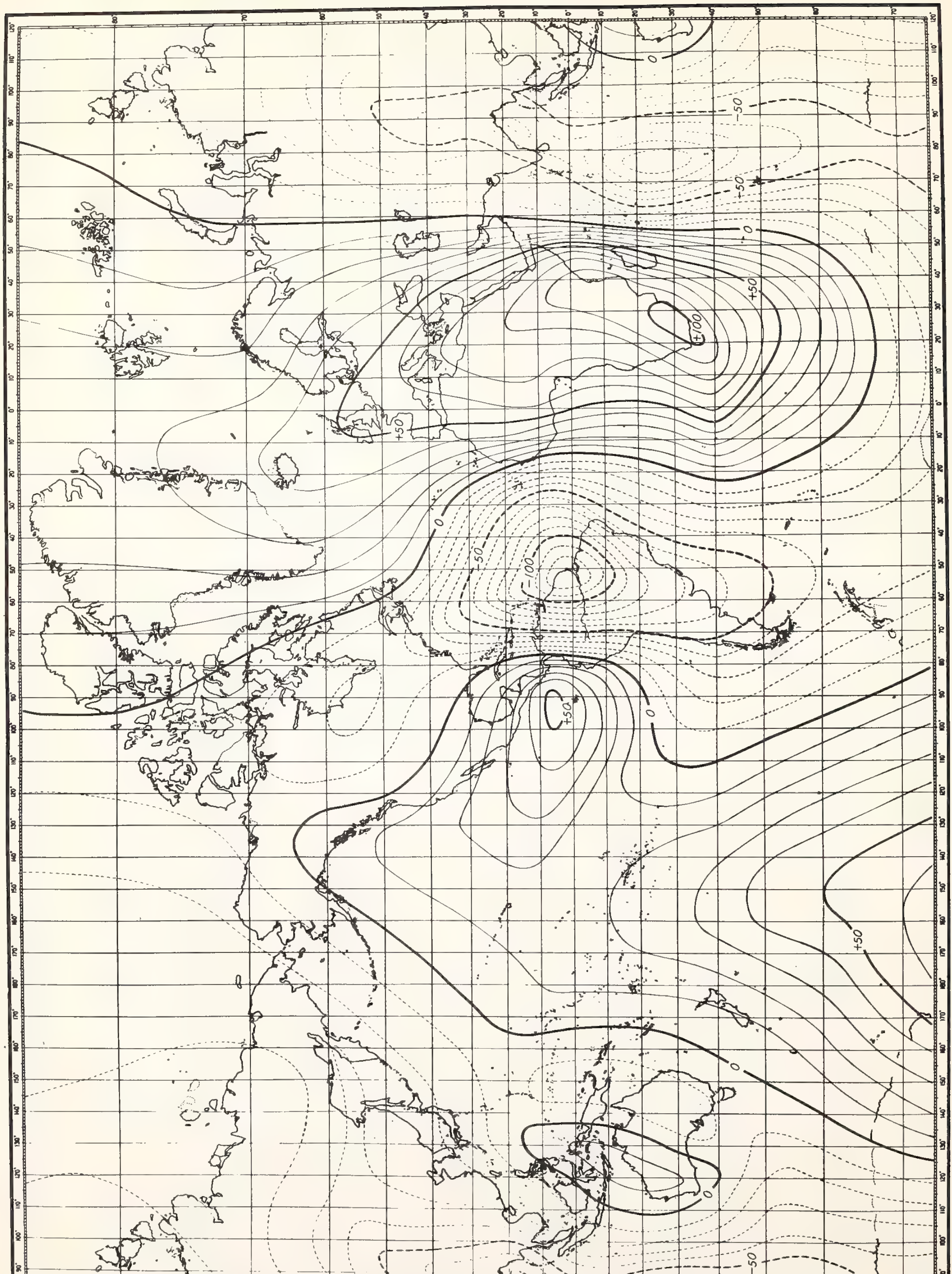

FIG. 128(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1912.5

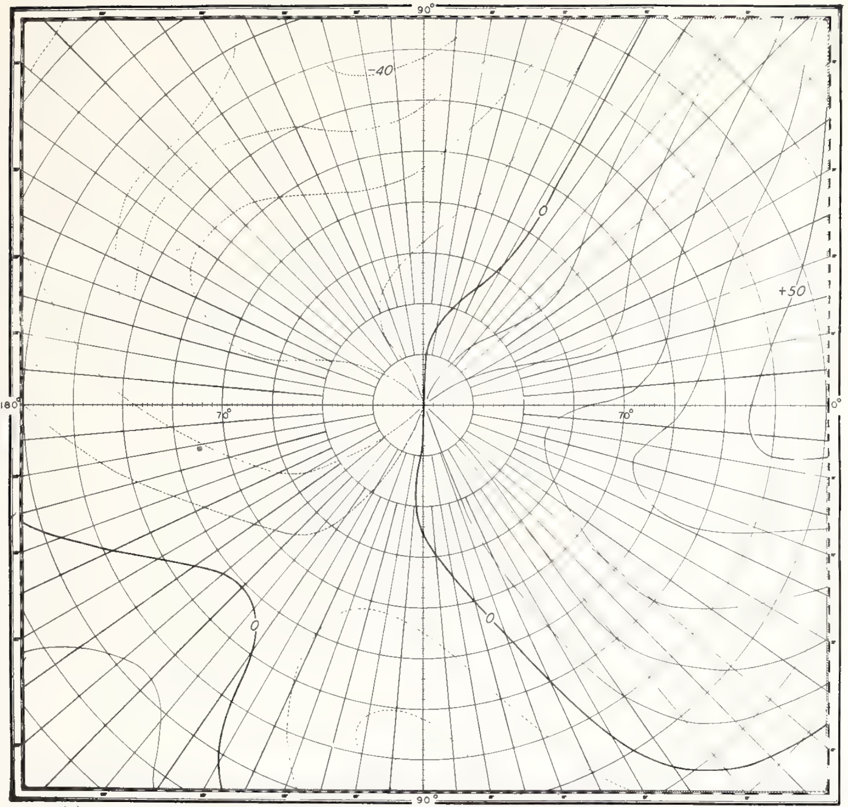

FIG. 128(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1912.5, NORTH POLAR REGION

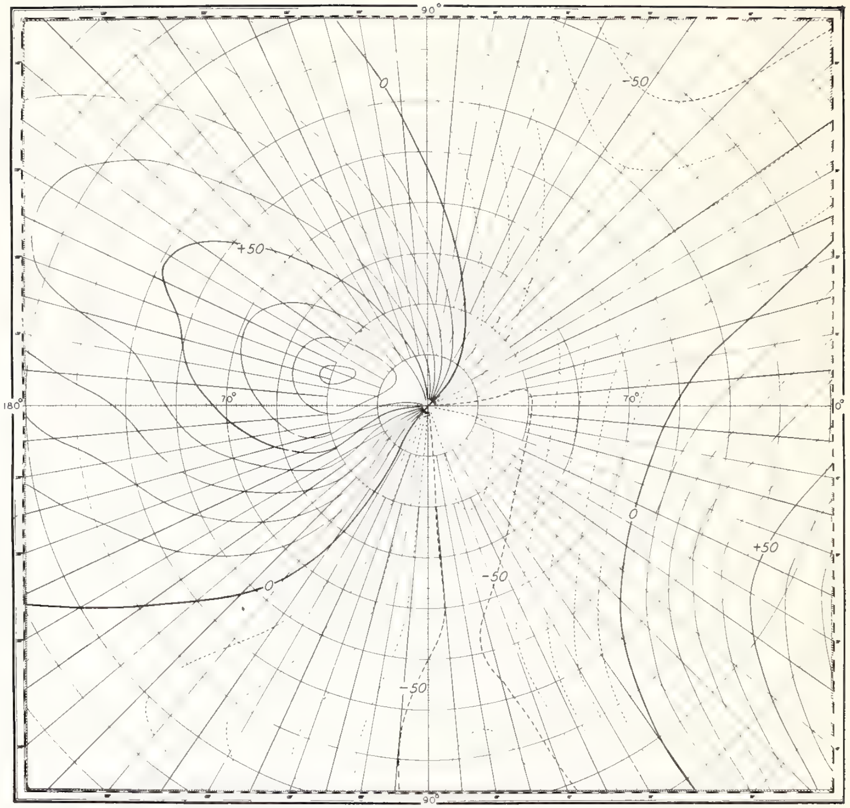

FIG. 128(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1912.5, SOUTH POLAR REGION

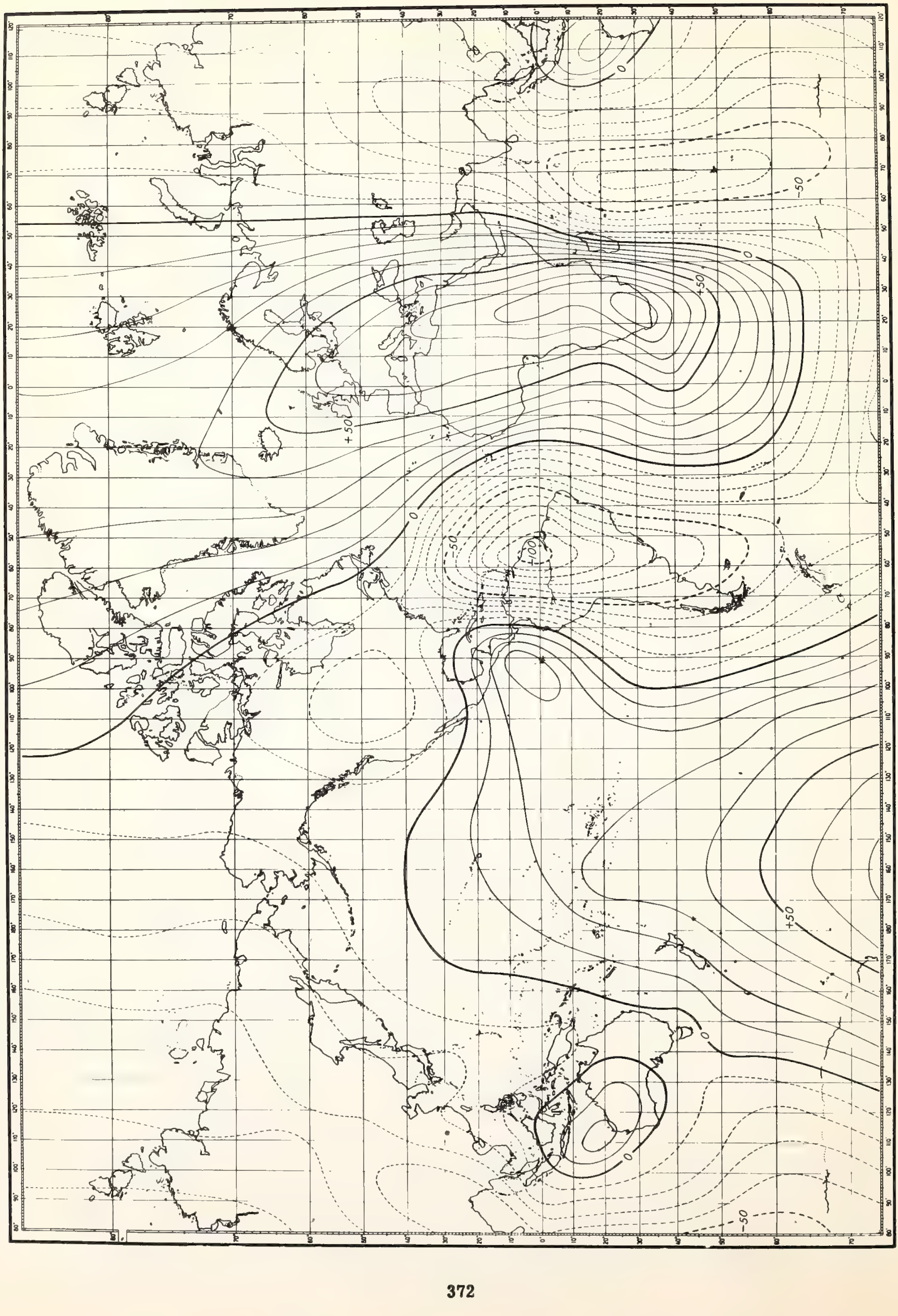

FIG. 129(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1922.5

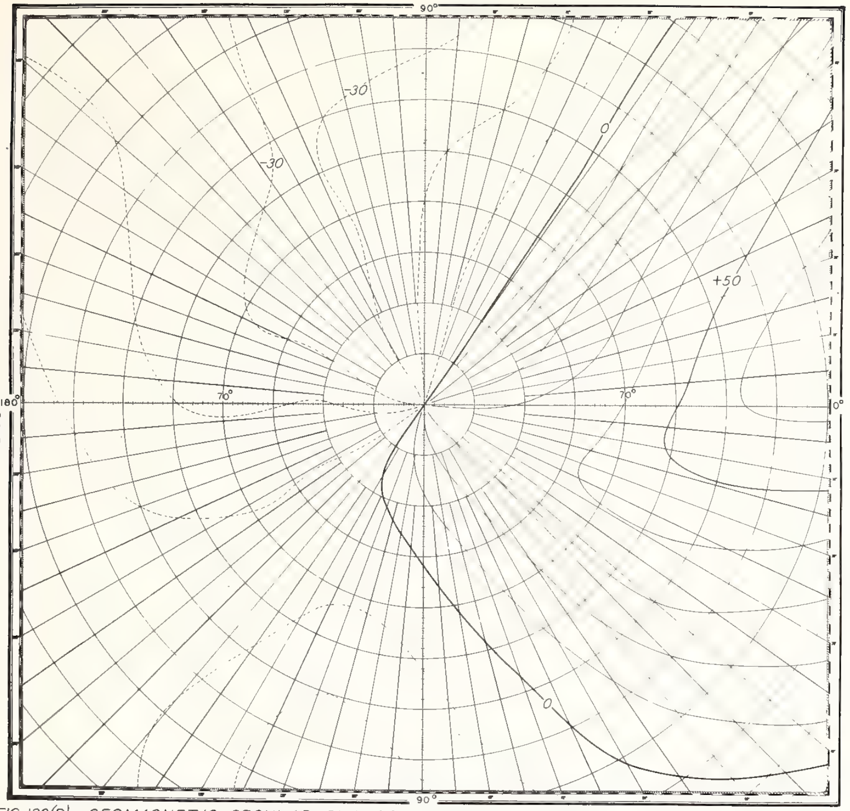

FIG. 129(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1922.5, NORTH POLAR REGION

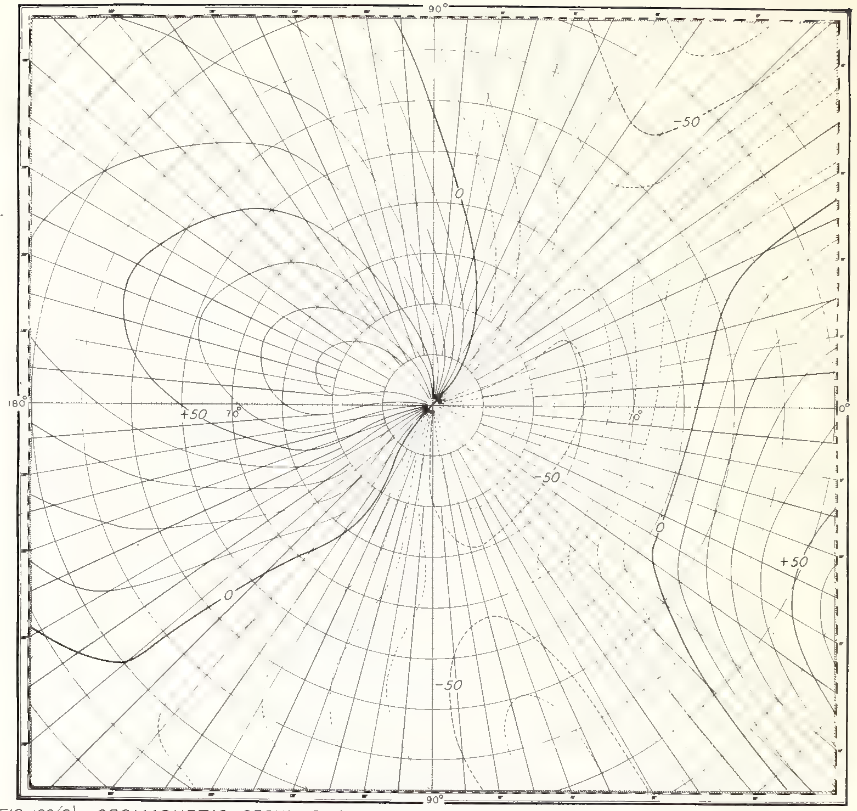

FIG. 129(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1922.5, SOUTH POLAR REGION

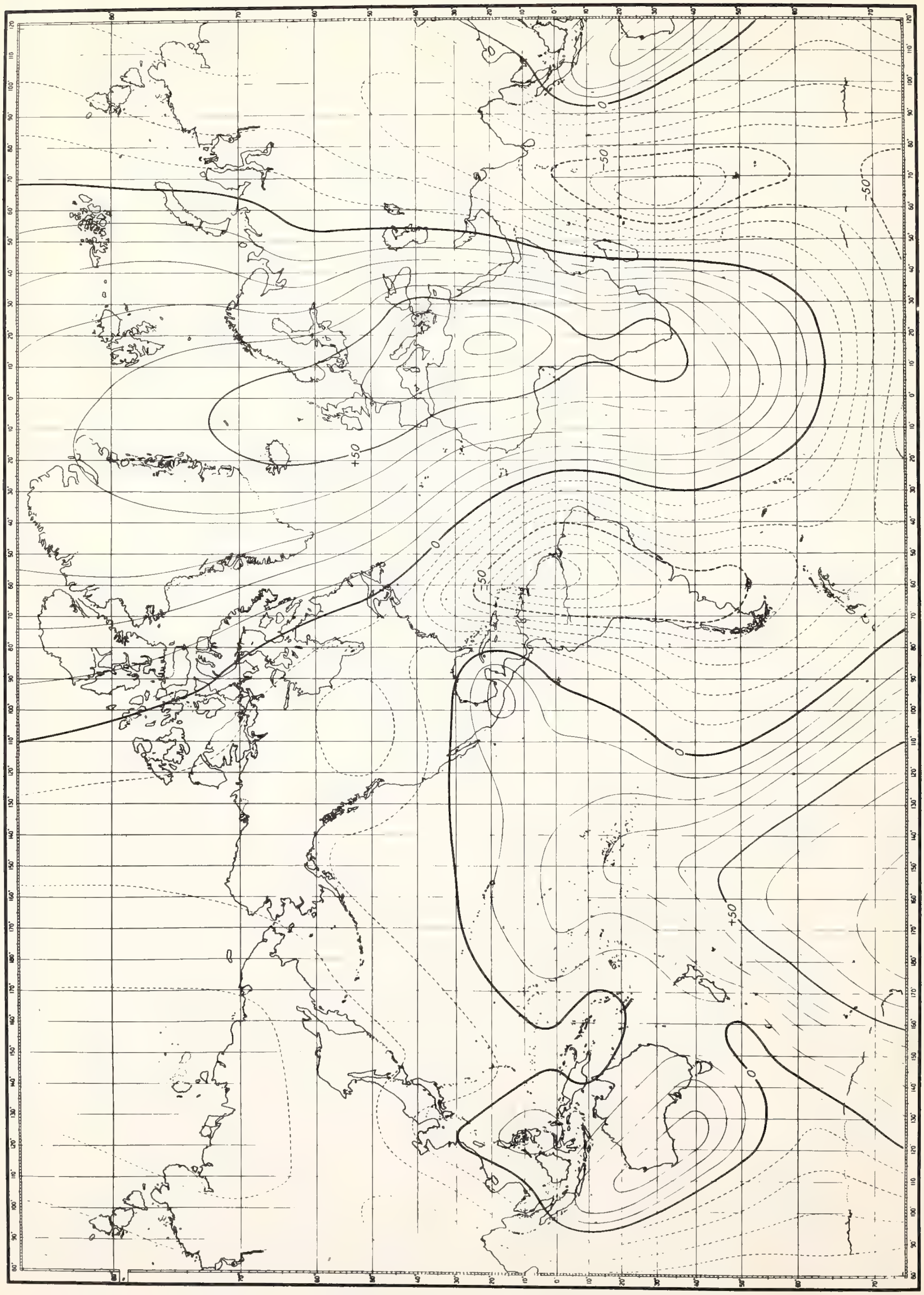

FIG. 130(A) — GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1932.5

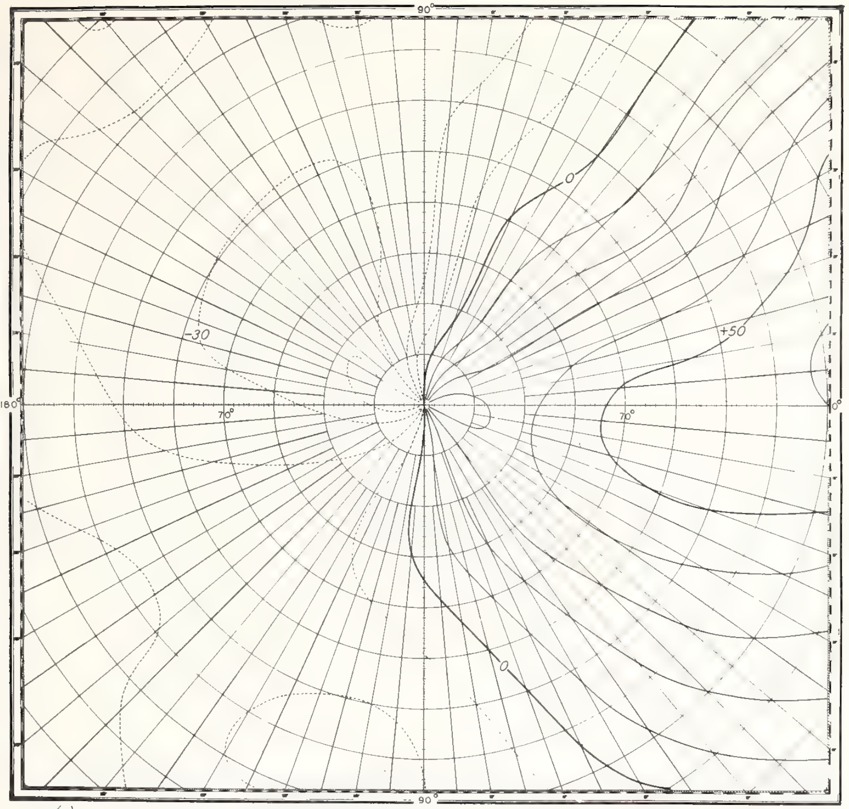

FIG. 130(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1932.5, NORTH POLAR REGION

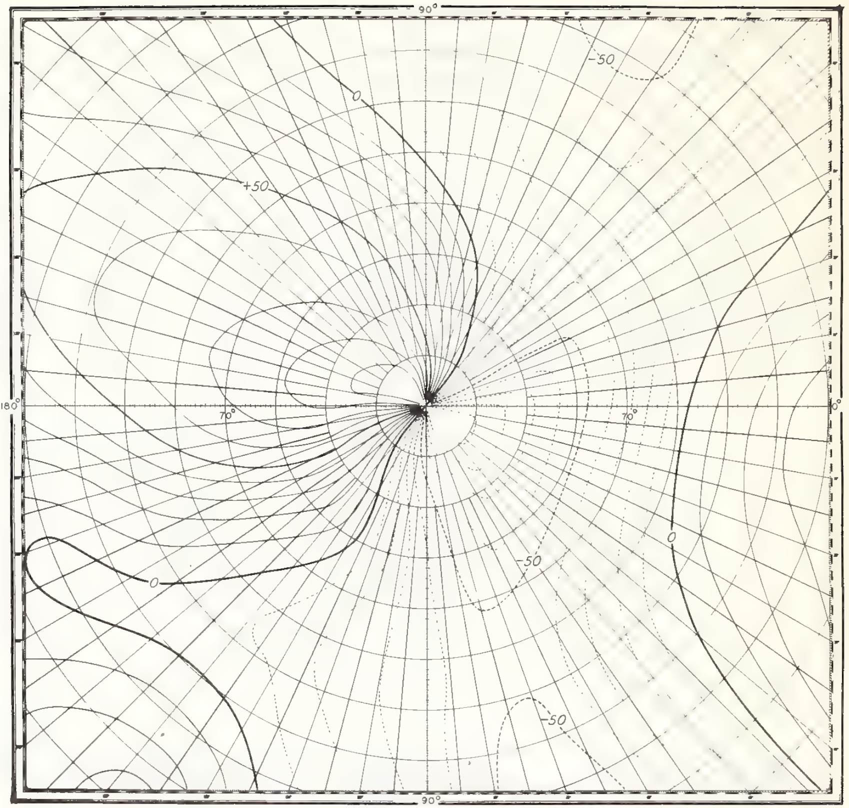

FIG. 130(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1932.5, SOUTH POLAR REGION

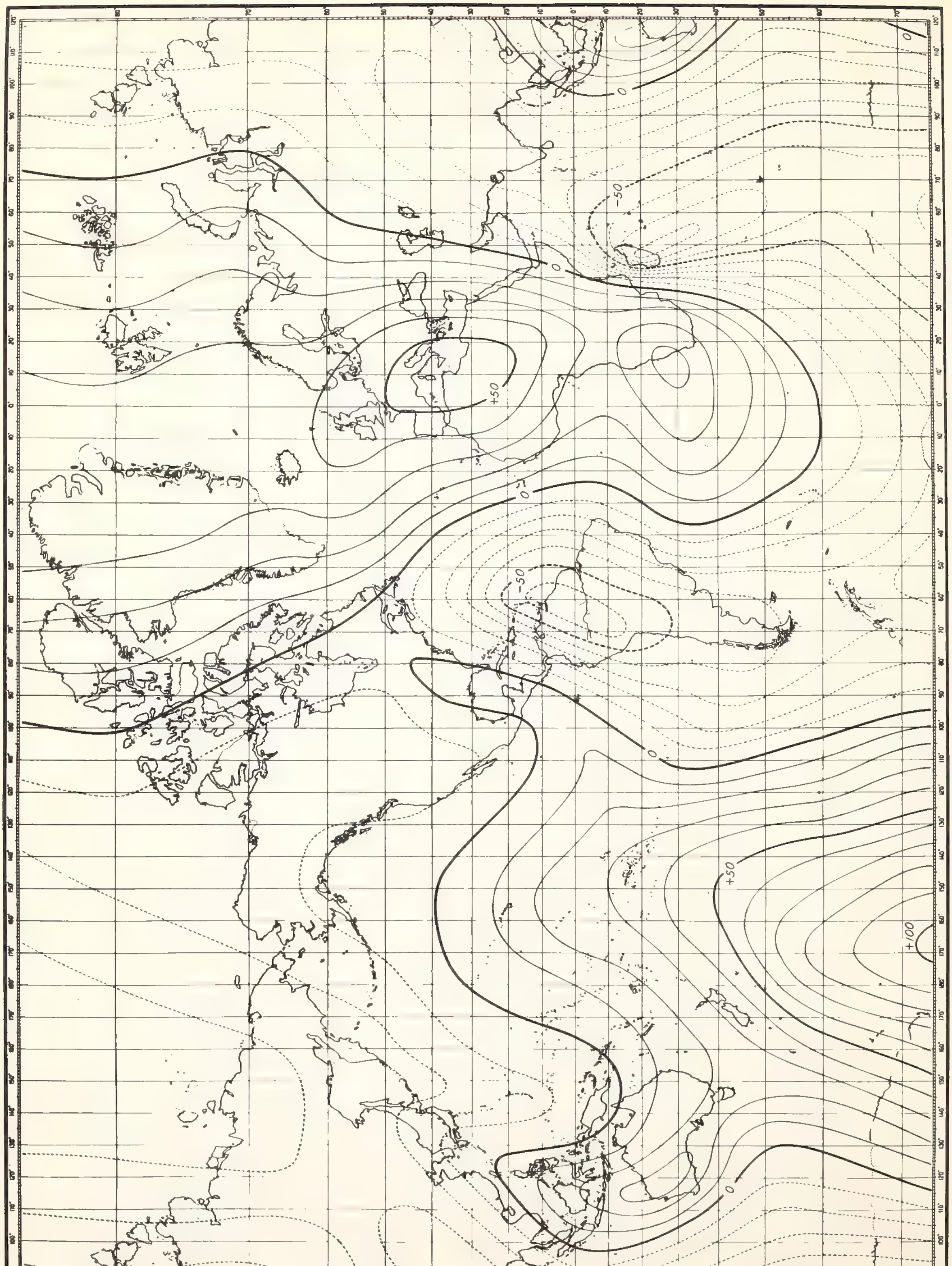

FIG. 131(A) —GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1942.5

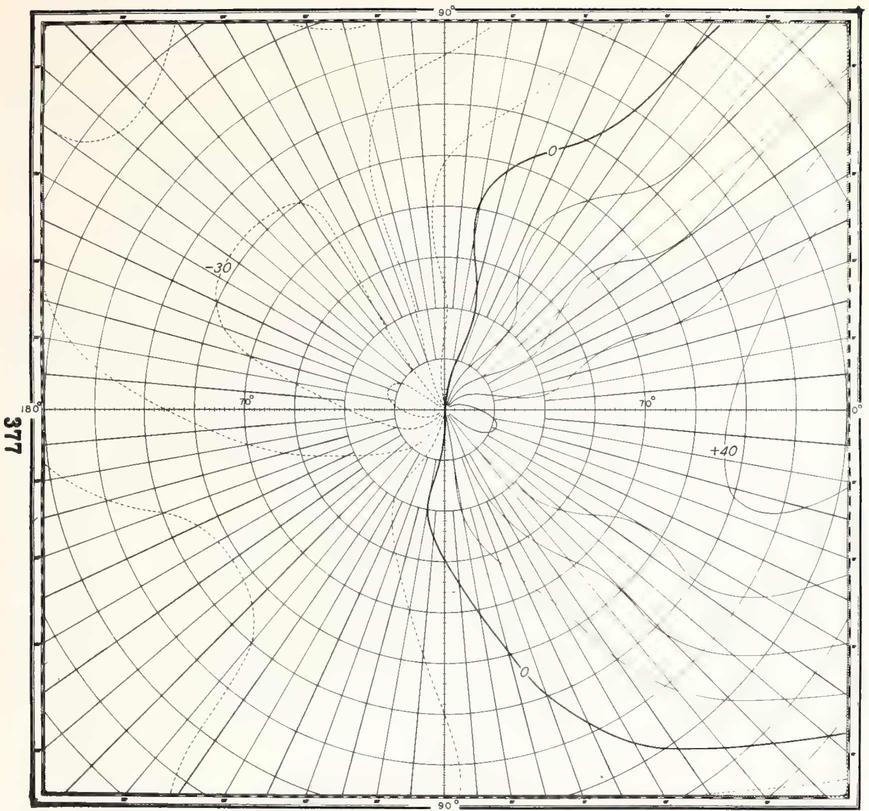

FIG. 131(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1942.5, NORTH POLAR REGION

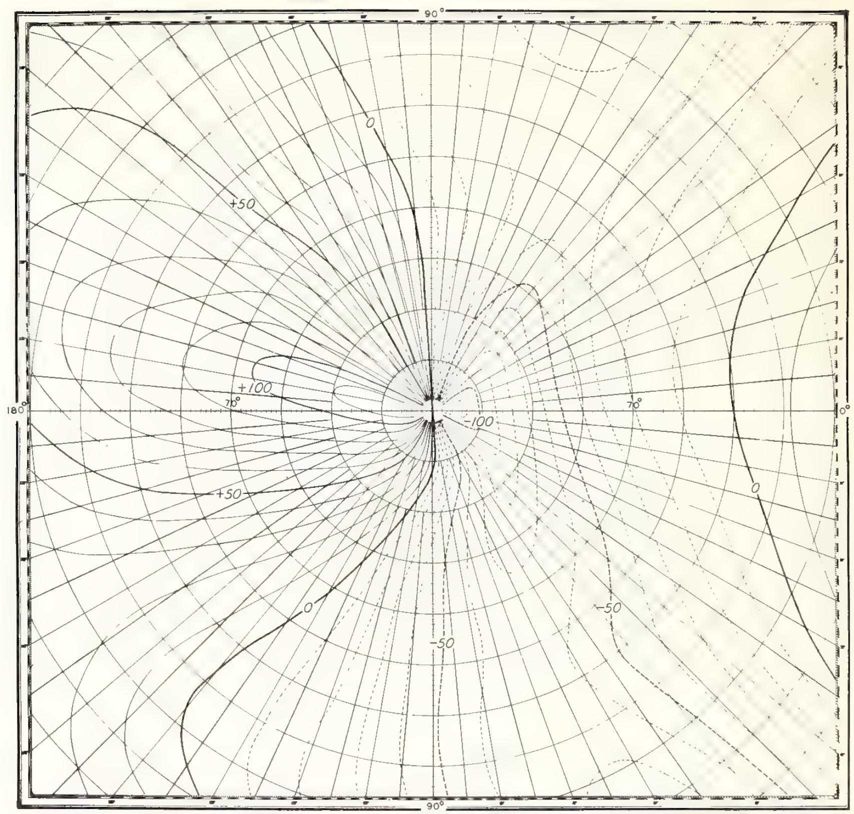

FIG. 131(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, EAST COMPONENT, EPOCH 1942.5, SOUTH POLAR REGION

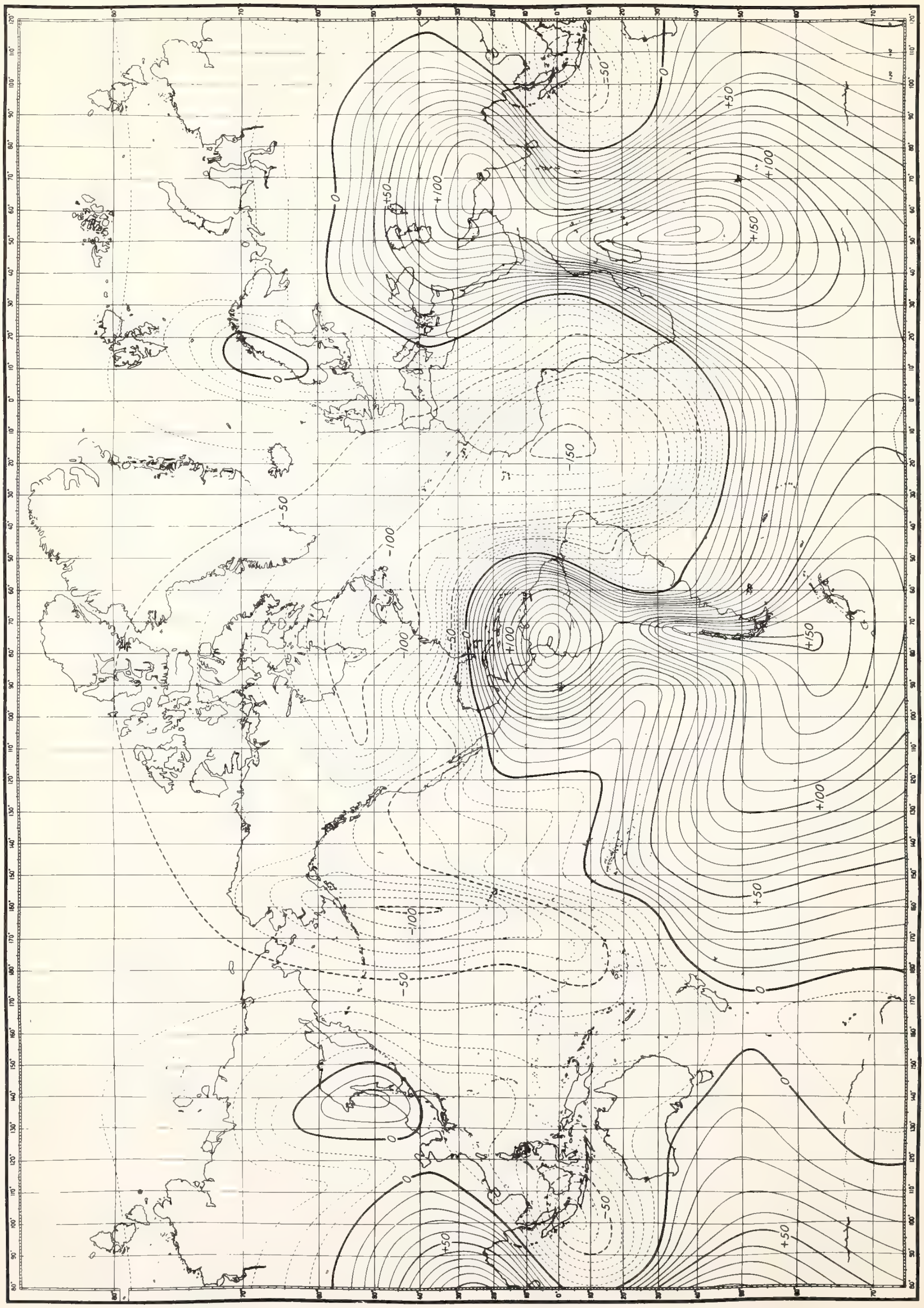

FIG. 132(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1912.5

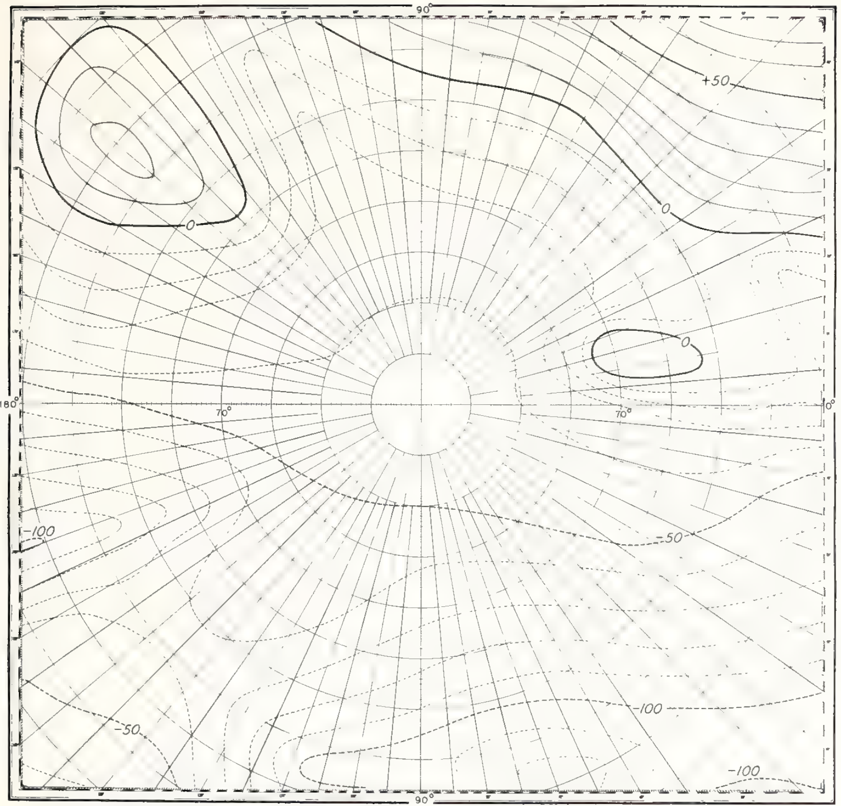

FIG. 132 (B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1912.5, NORTH POLAR REGION

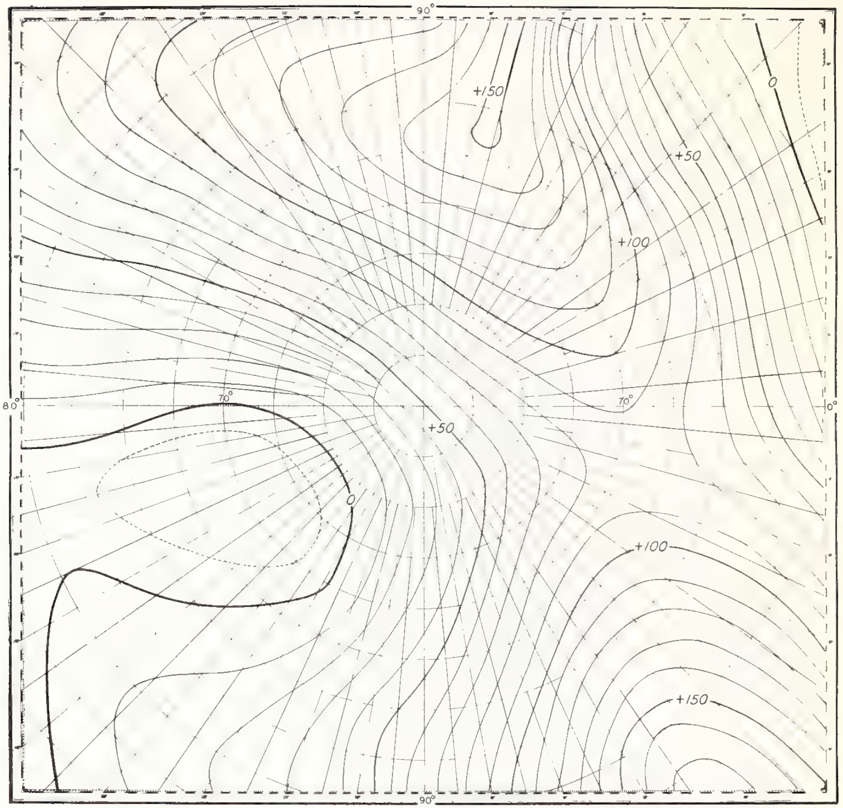

FIG. 132 (C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1912.5, SOUTH POLAR REGION

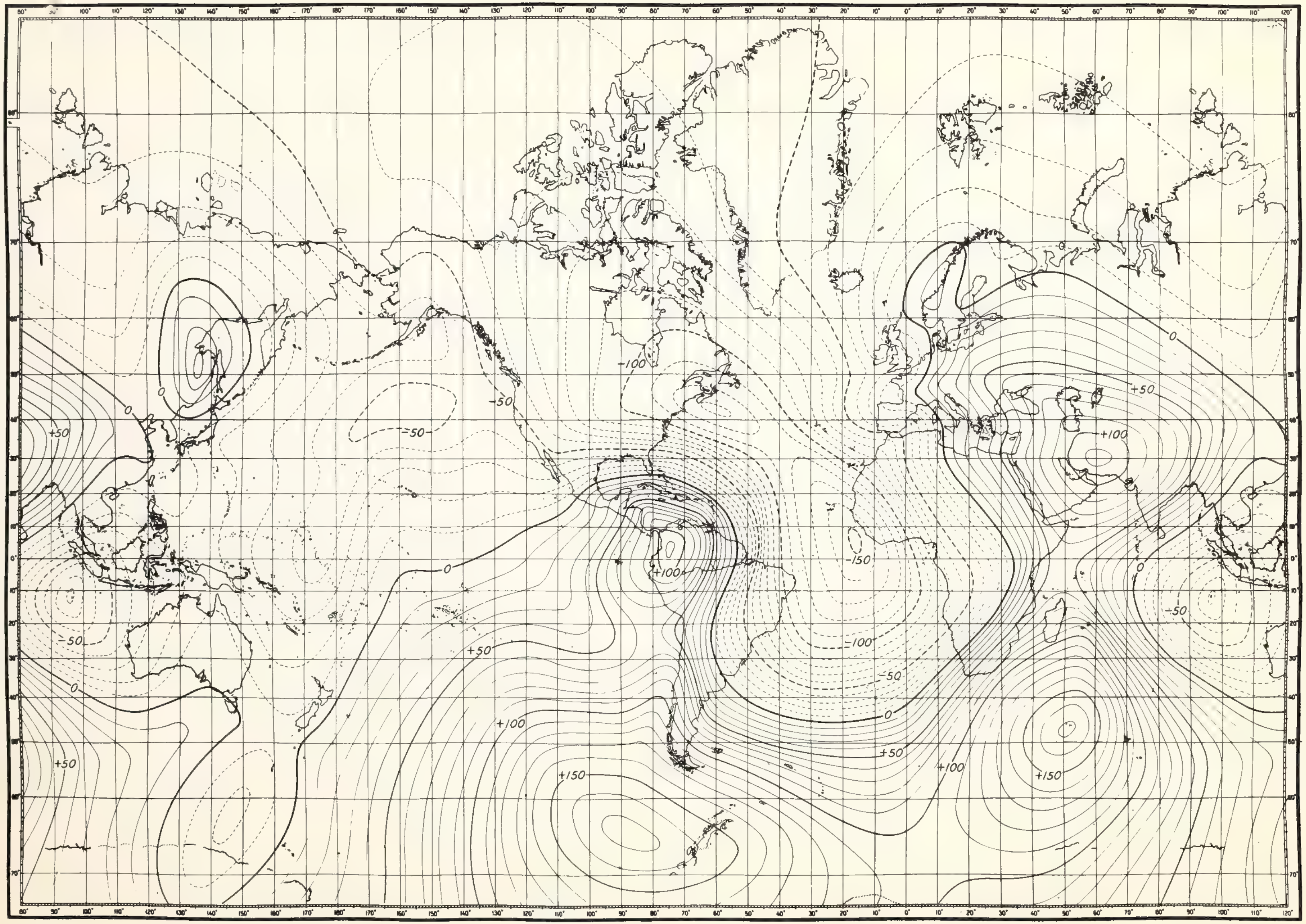

FIG. 133(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1922.5

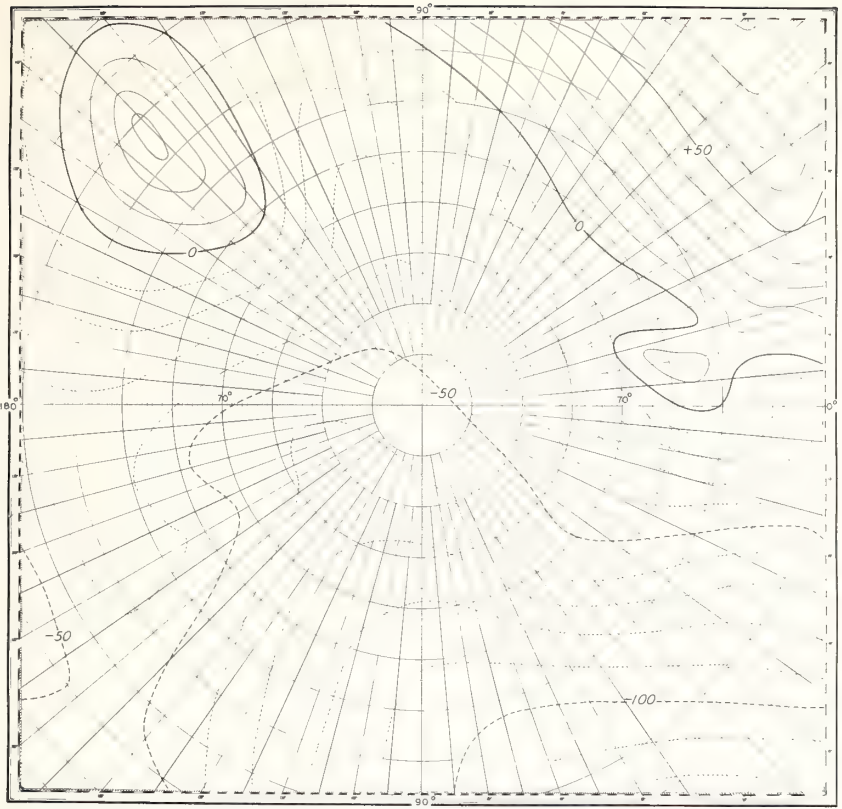

FIG. 133(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1922.5, NORTH POLAR REGION

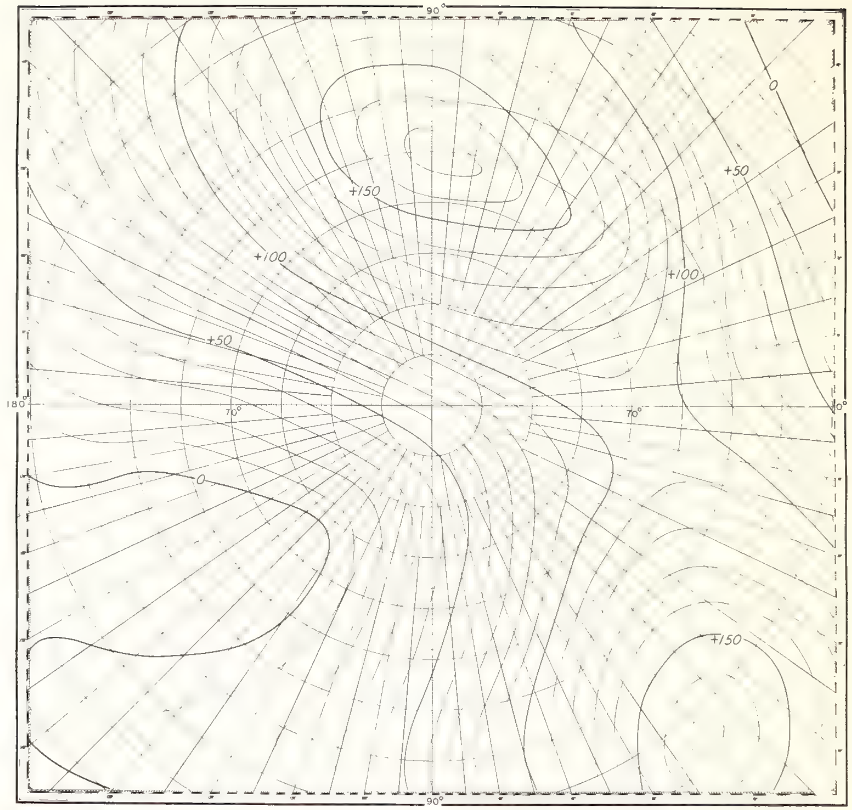

FIG. 133(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1922.5, SOUTH POLAR REGION

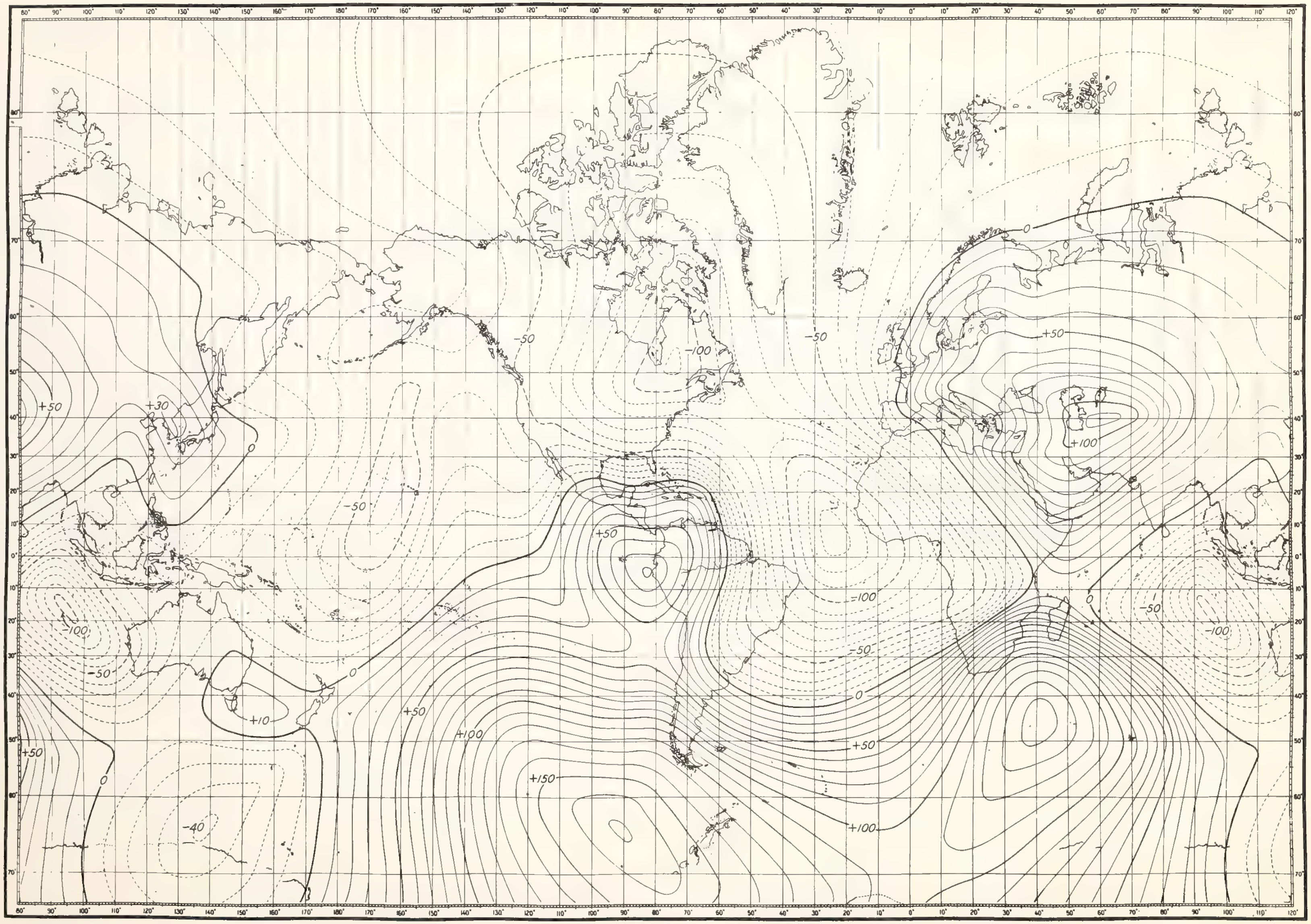

FIG. 134 (A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1932.5

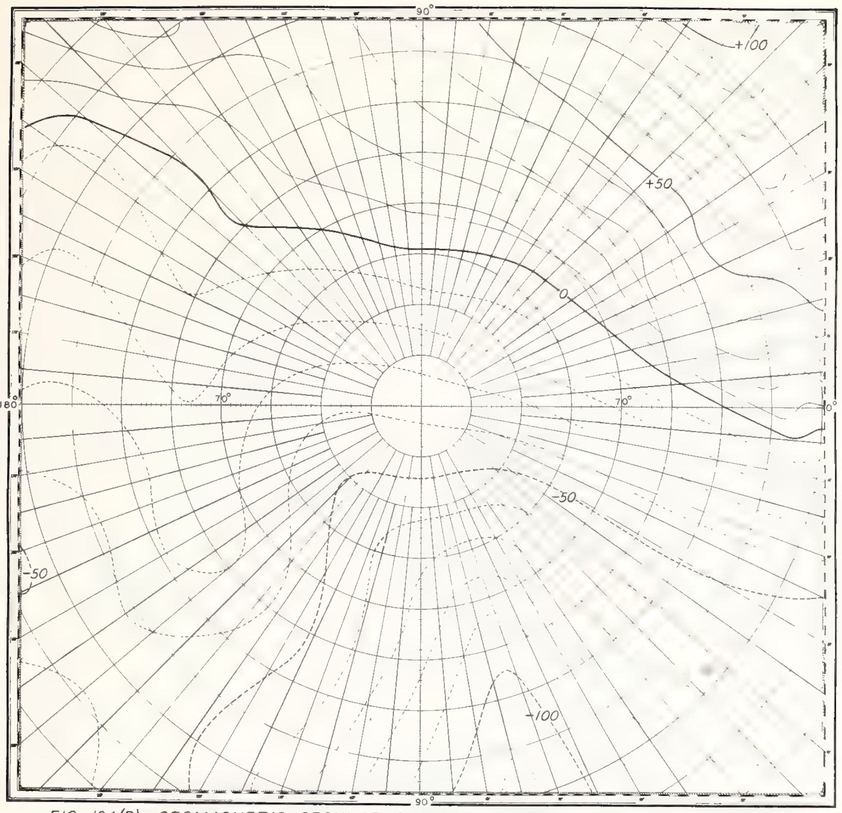

FIG. 134(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1932.5, NORTH POLAR REGION

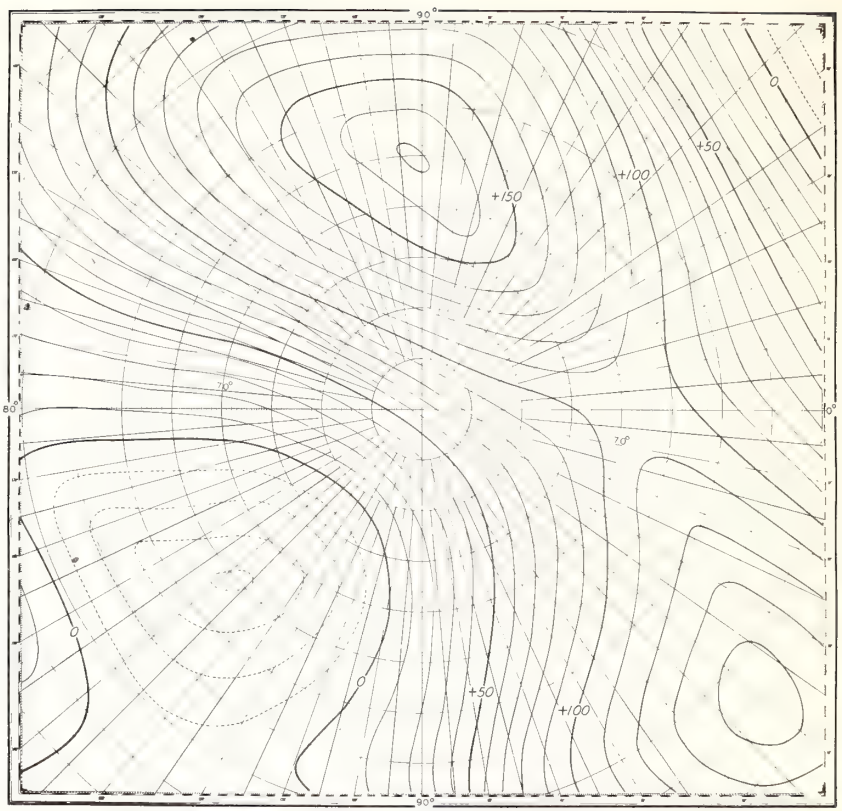

FIG. 134(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1932.5, SOUTH POLAR REGION

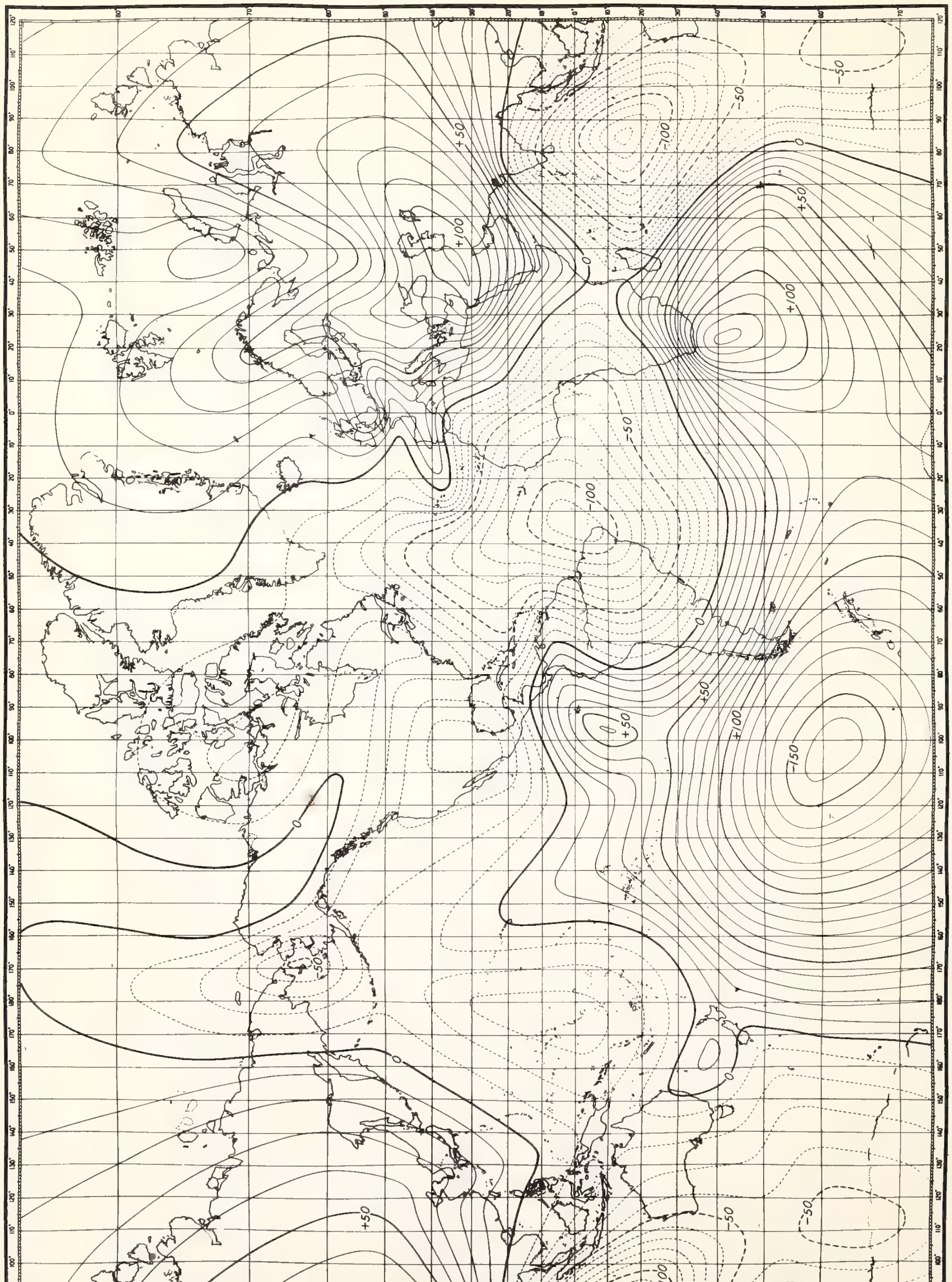

FIG. 135(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1942.5

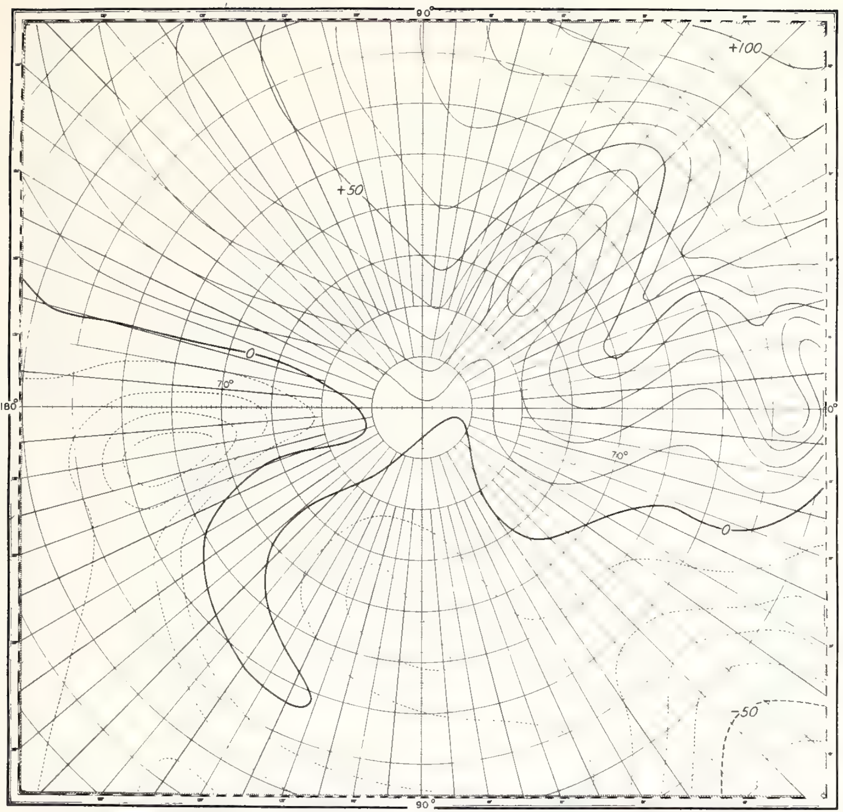

FIG. 135(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1942.5, NORTH POLAR REGION

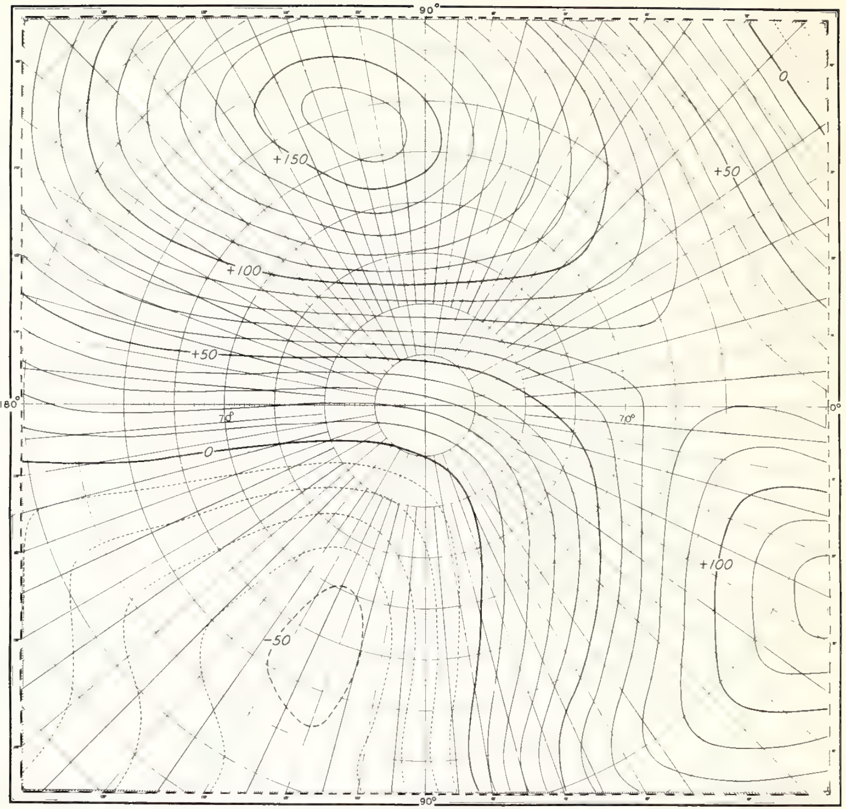

FIG. 135(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, VERTICAL INTENSITY, EPOCH 1942.5, SOUTH POLAR REGION

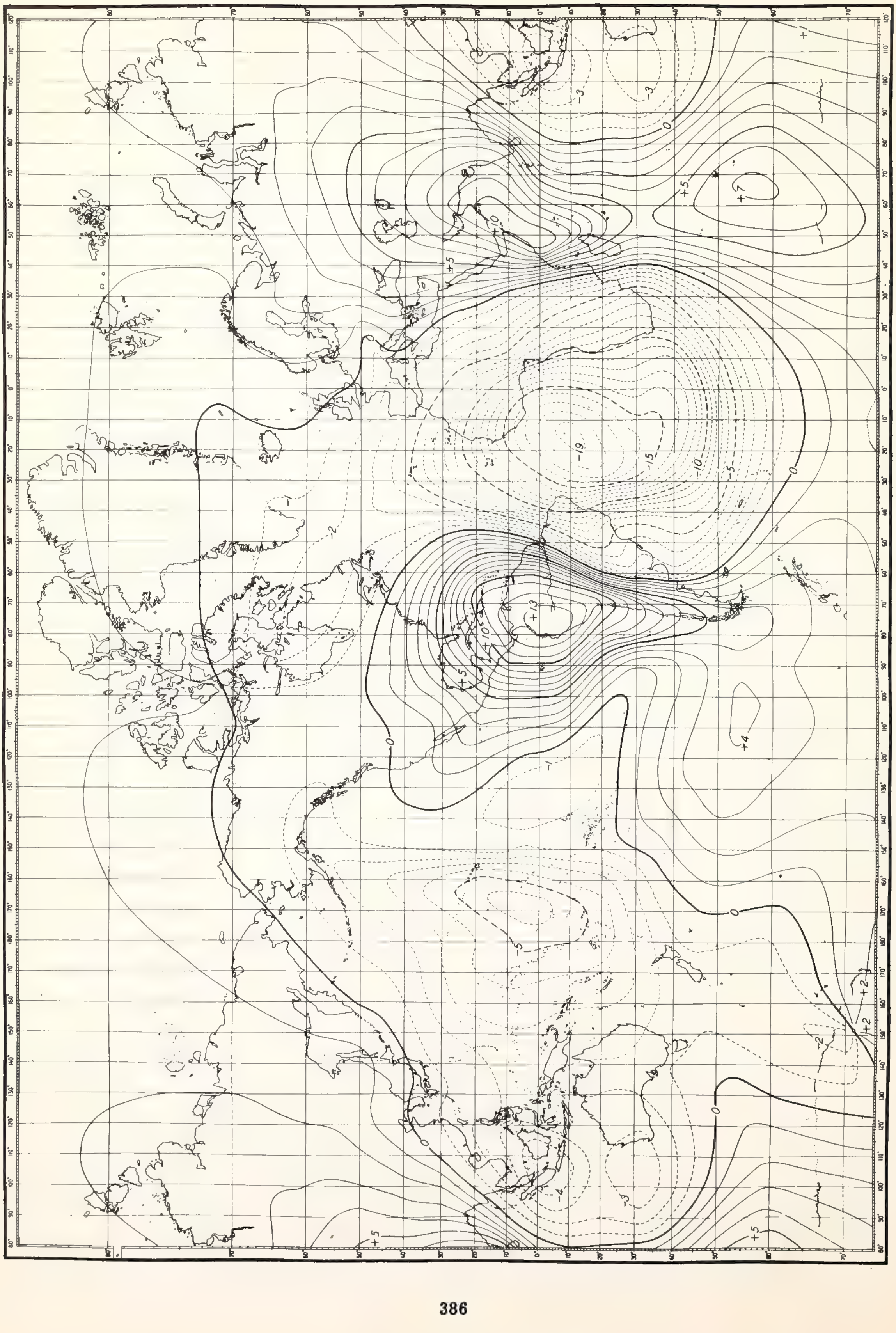

FIG. 136(A)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1912.5

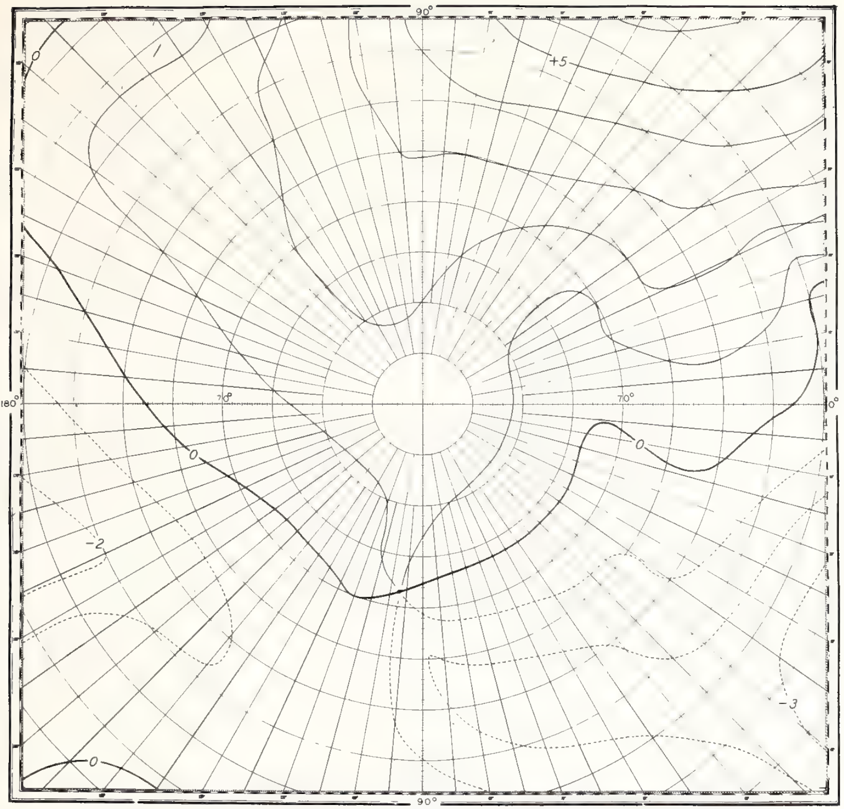

FIG. 136 (B)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1912.5, NORTH POLAR REGION

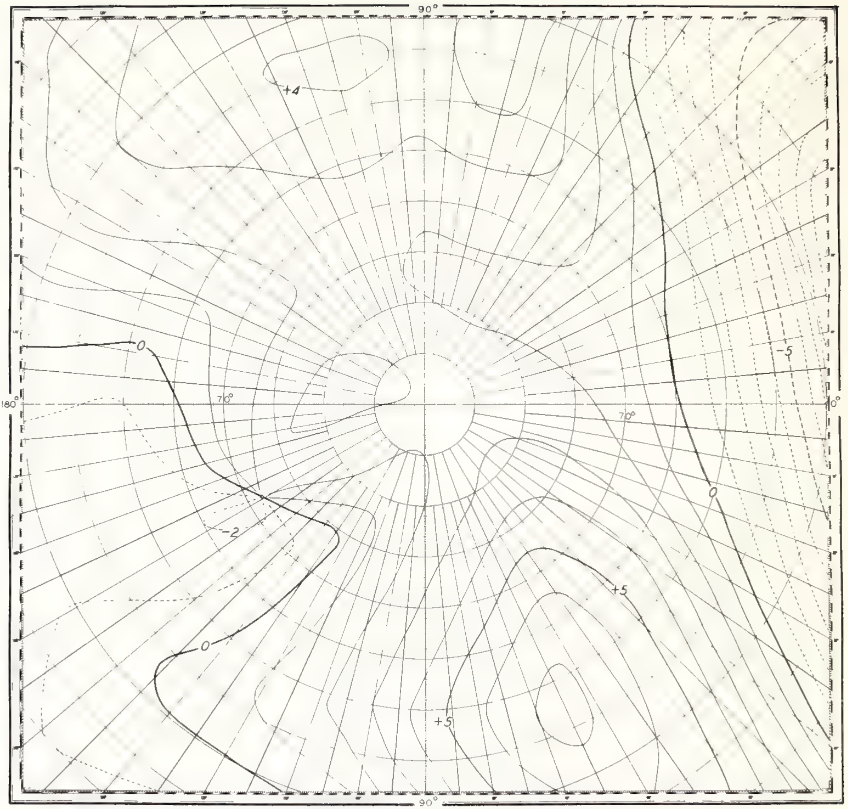

FIG. 136 (C)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1912.5, SOUTH POLAR REGION

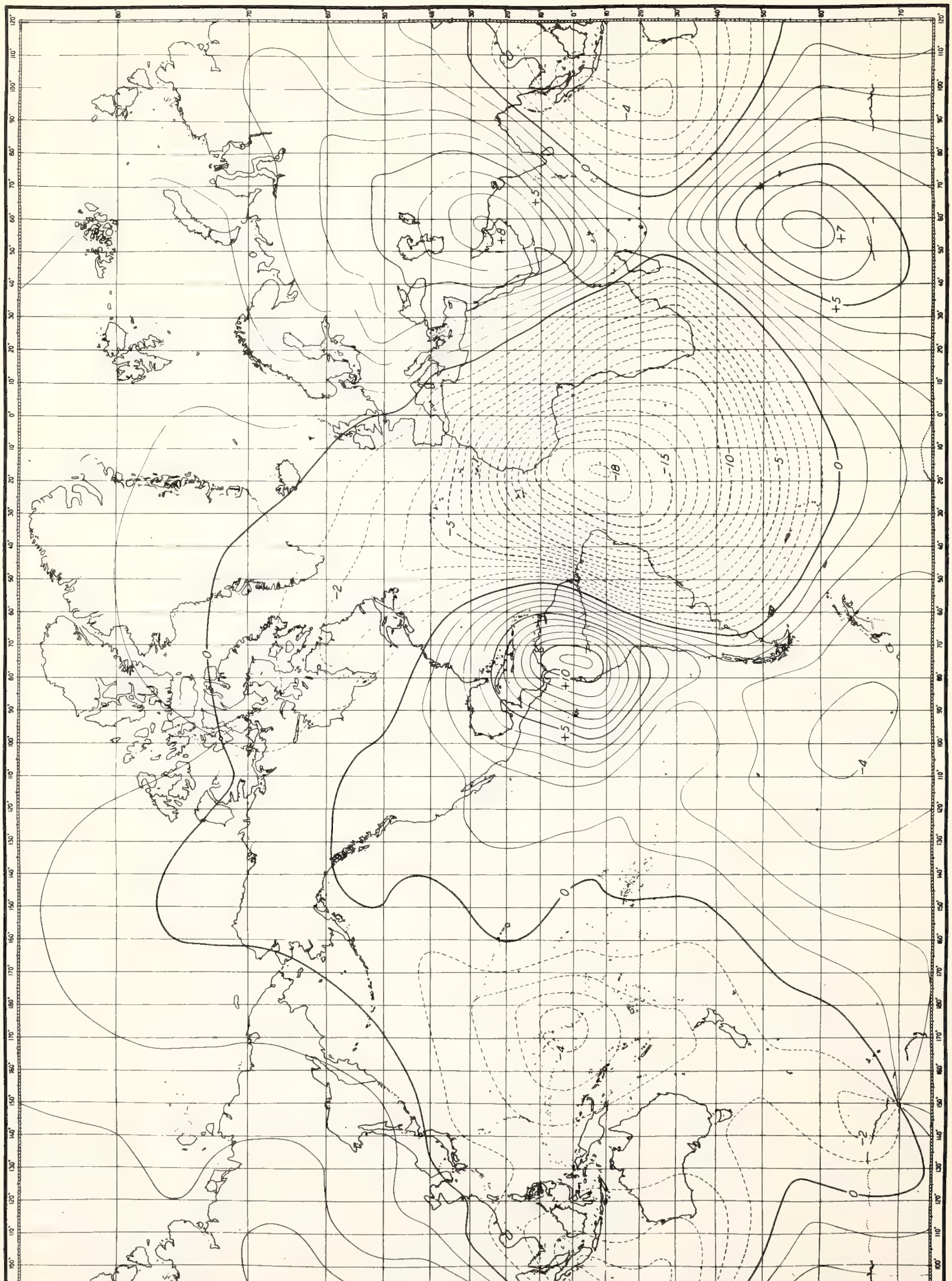

FIG. 137(A)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1922.5

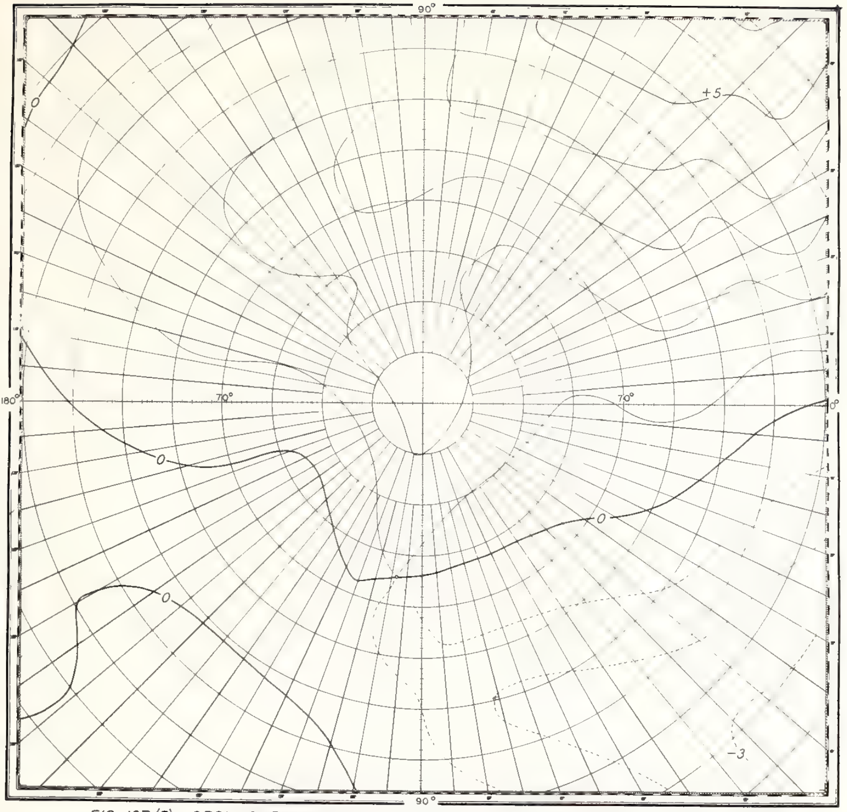

FIG. 137 (B)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1922.5, NORTH POLAR REGION

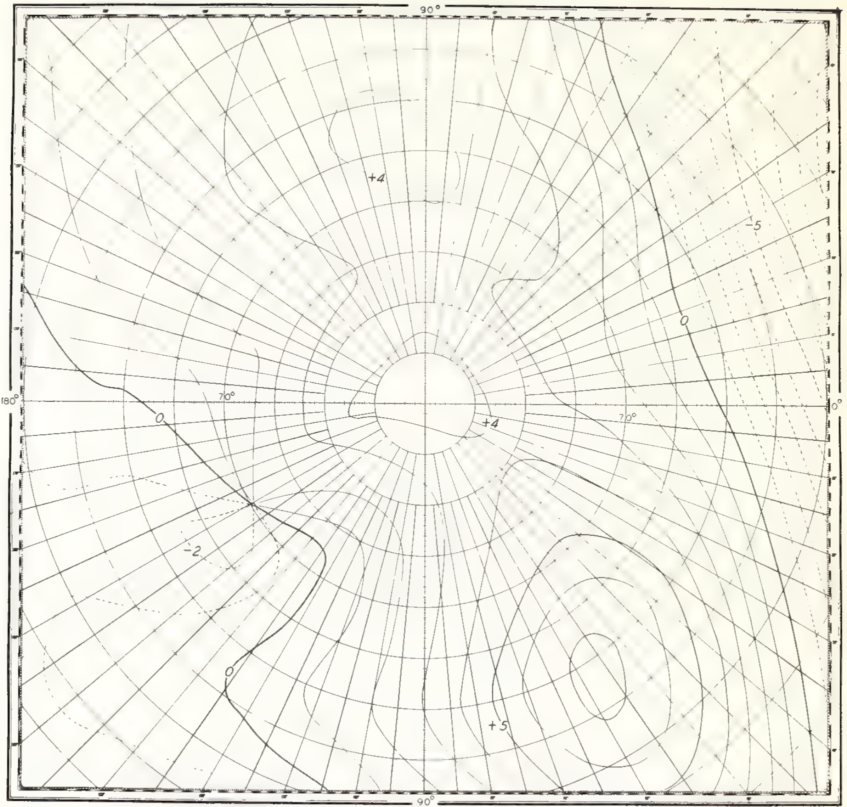

FIG. 137 (C)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1922.5, SOUTH POLAR REGION

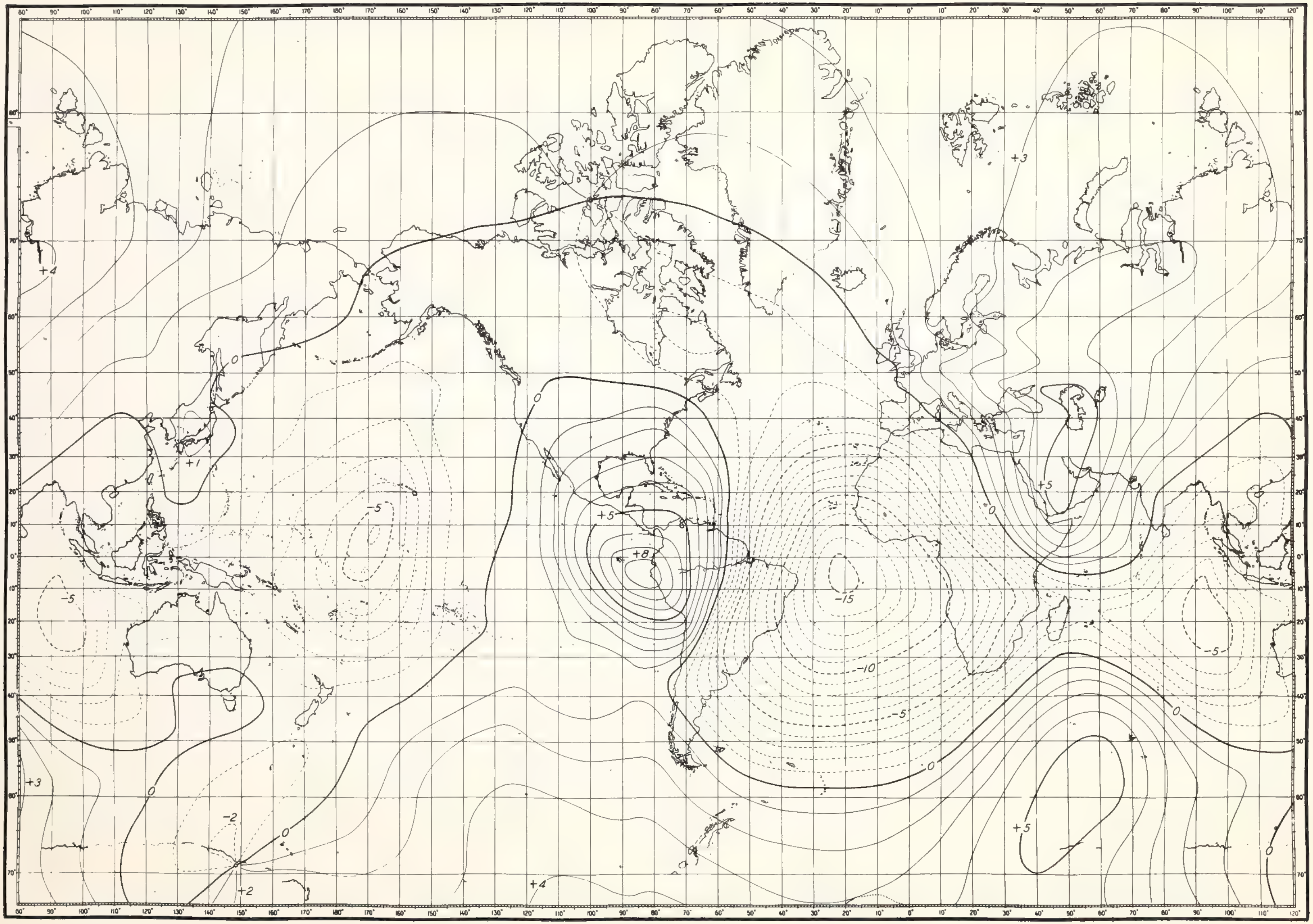

FIG. 138(A)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1932.5

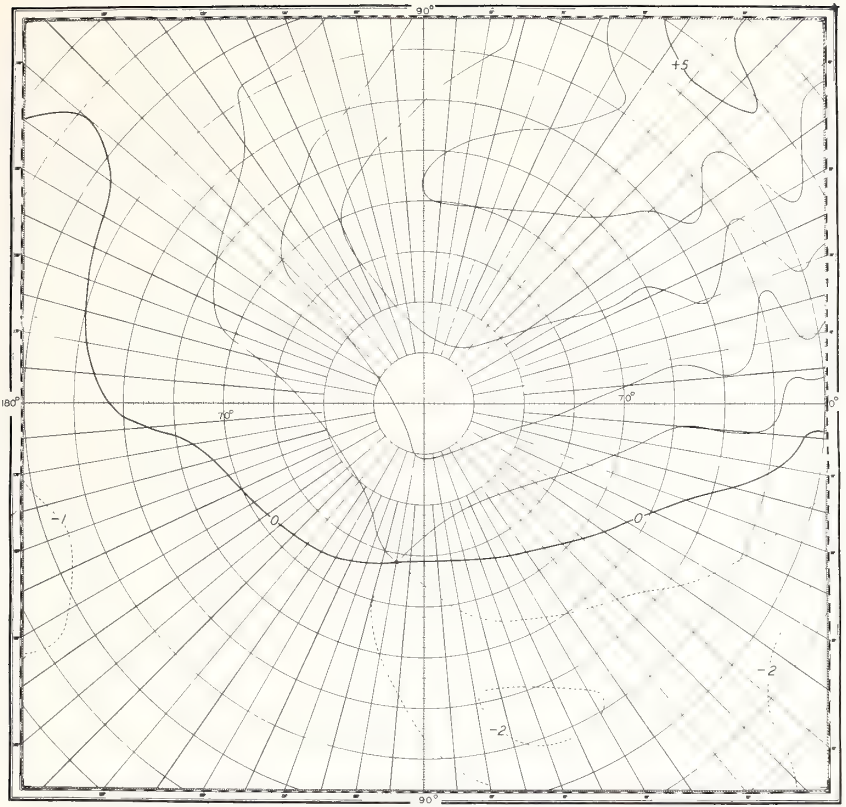

FIG. 138 (B) – GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1932.5, NORTH POLAR REGION

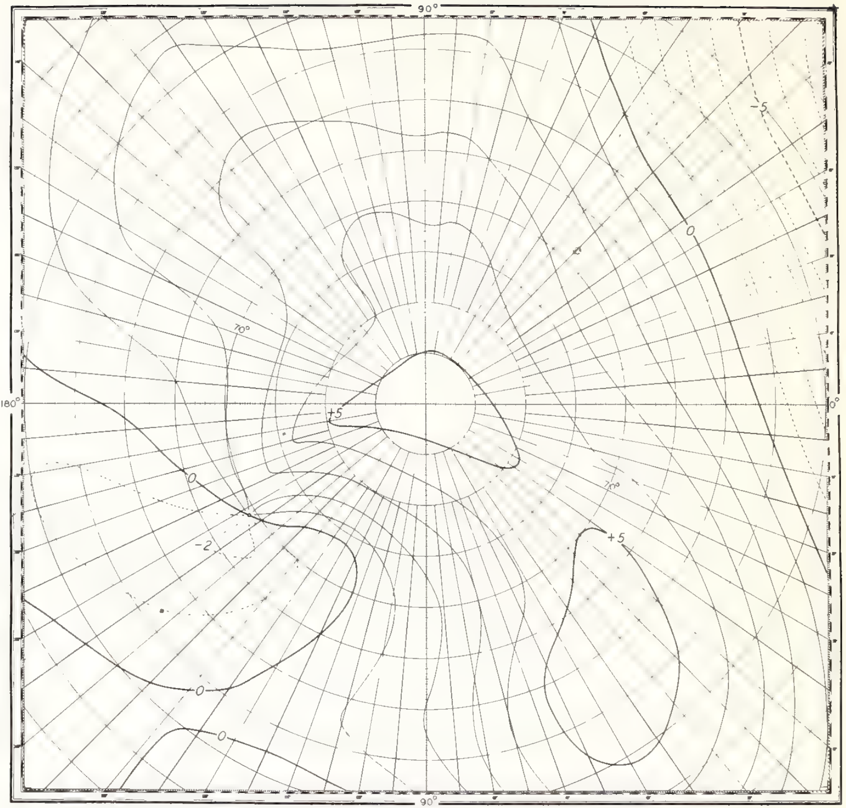

FIG. 138 (C) – GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1932.5, SOUTH POLAR REGION

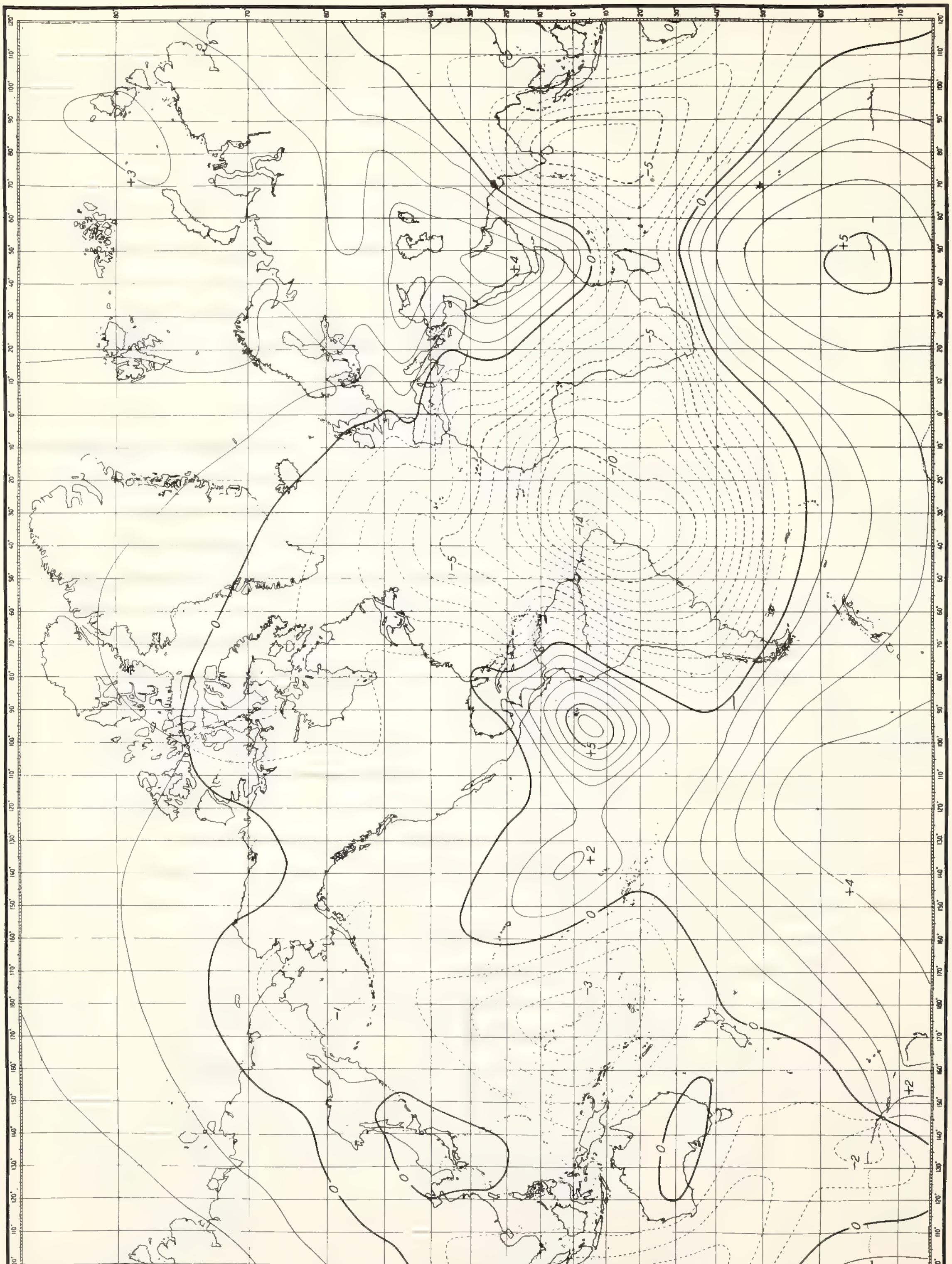

FIG. 139(A)—GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1942.5

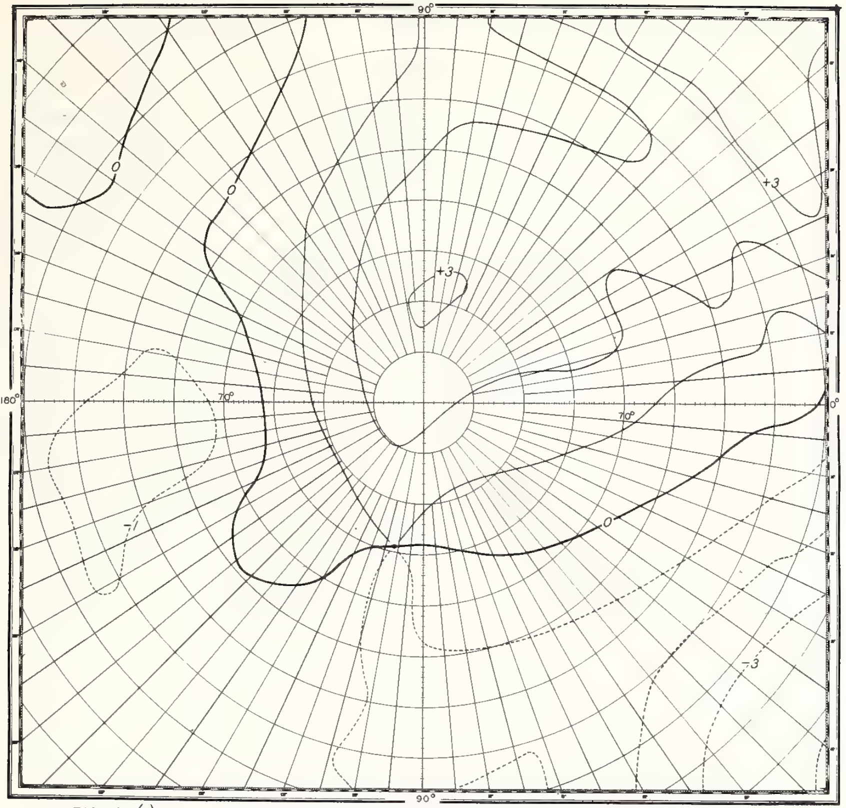

FIG. 139 (B) – GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1942.5, NORTH POLAR REGION

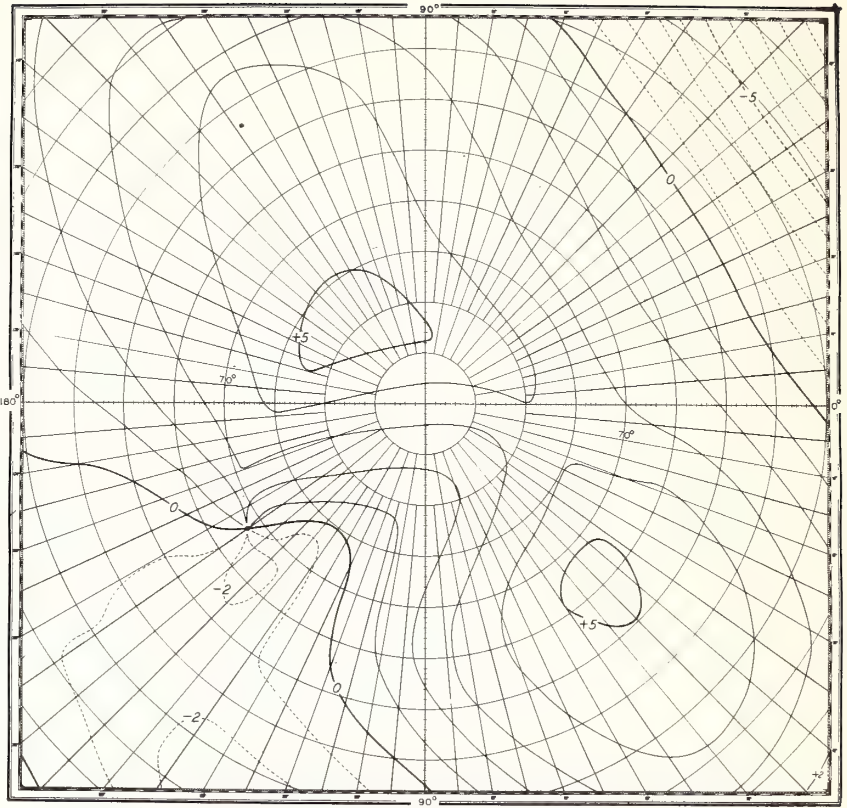

FIG. 139 (C) – GEOMAGNETIC SECULAR CHANGE IN MINUTES PER YEAR, INCLINATION, EPOCH 1942.5, SOUTH POLAR REGION

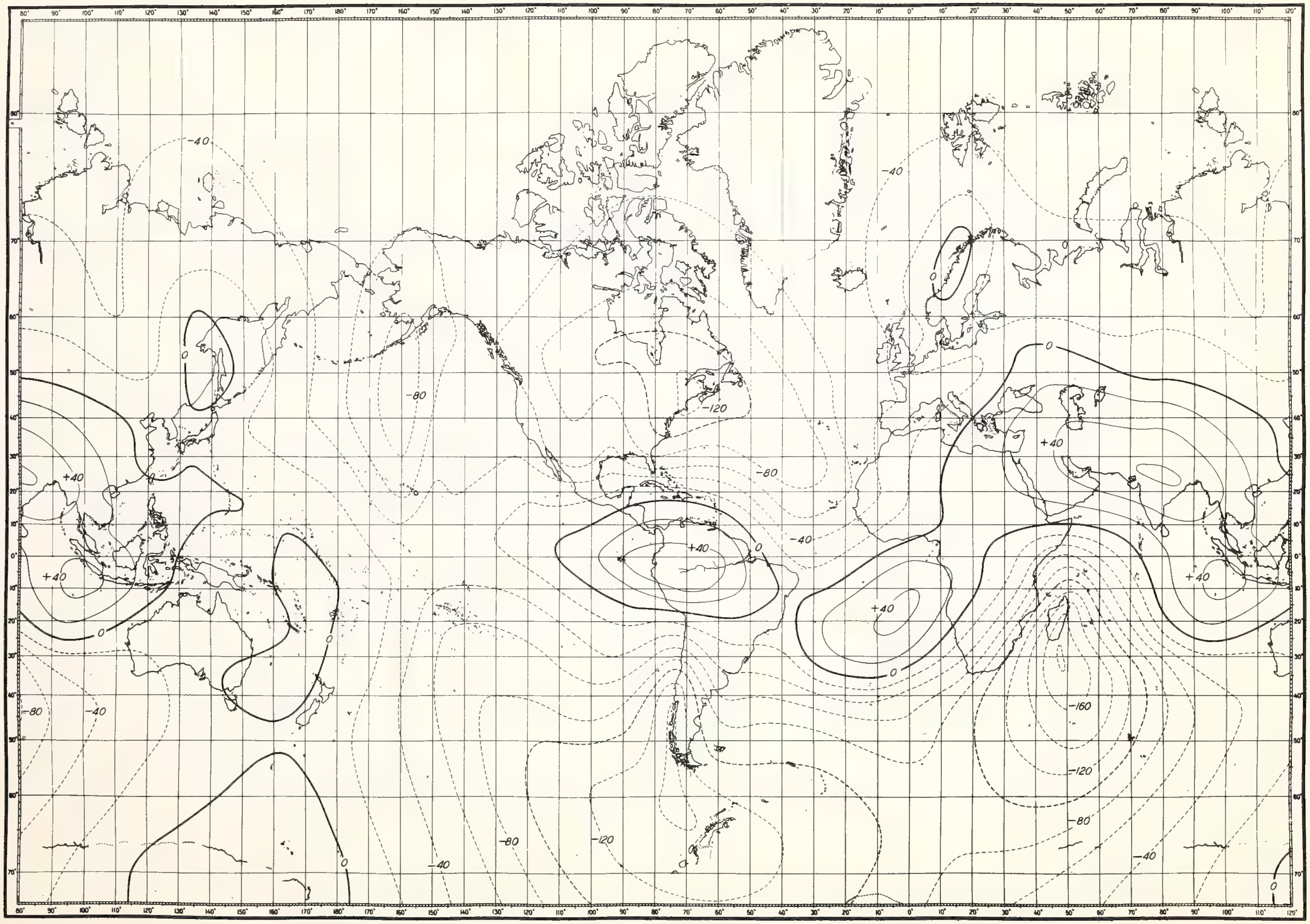

FIG. 140(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1912.5

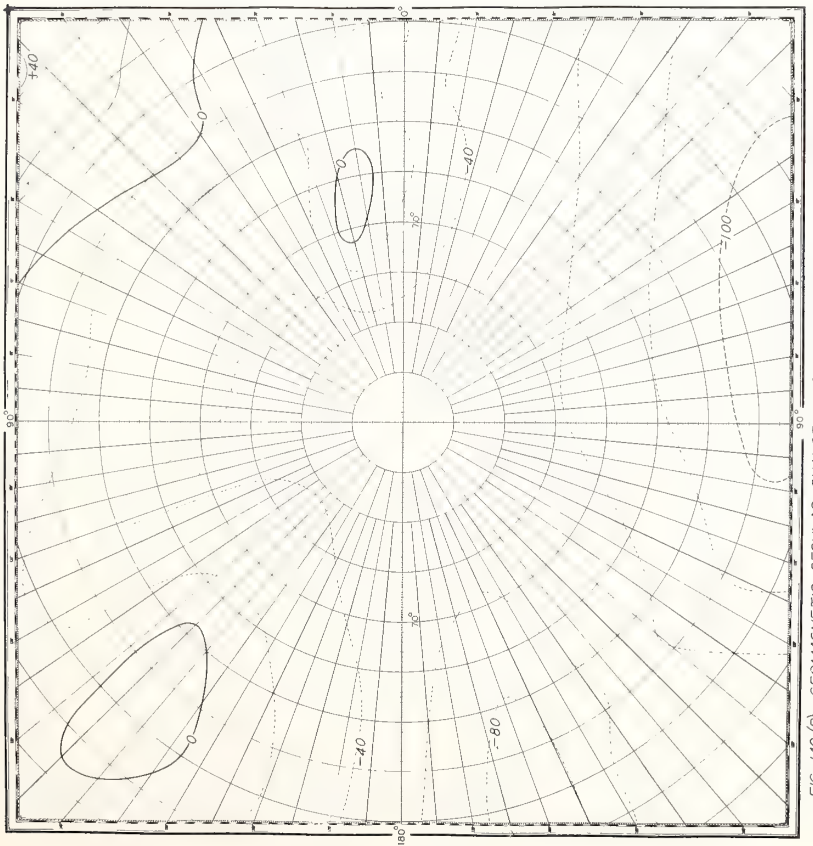

FIG. 140 (B) – GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1912.5, NORTH POLAR REGION

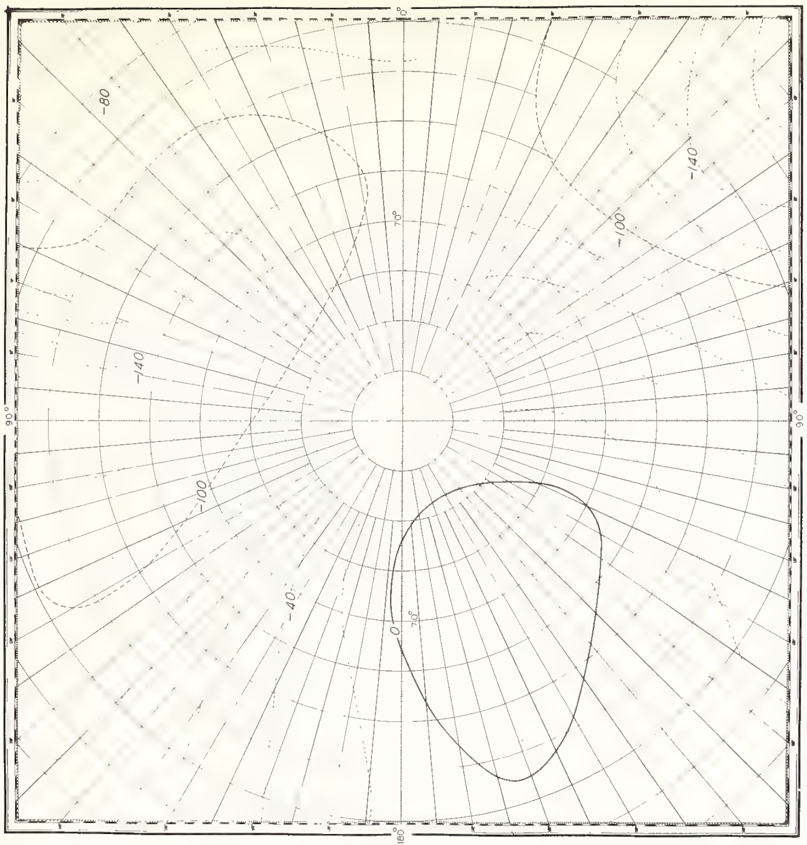

FIG. 140 (C) – GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1912.5, SOUTH POLAR REGION

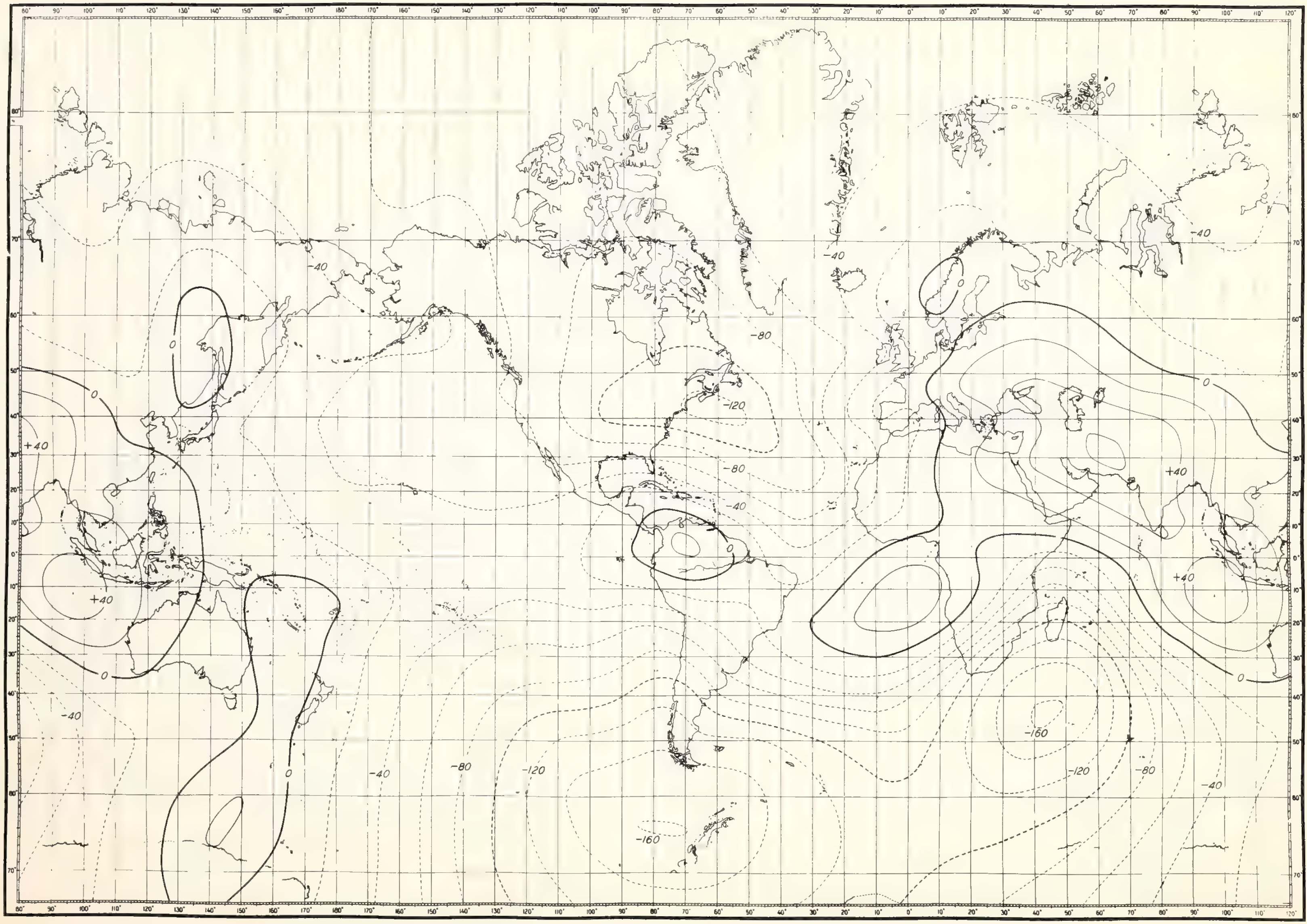

FIG. 141(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1922.5

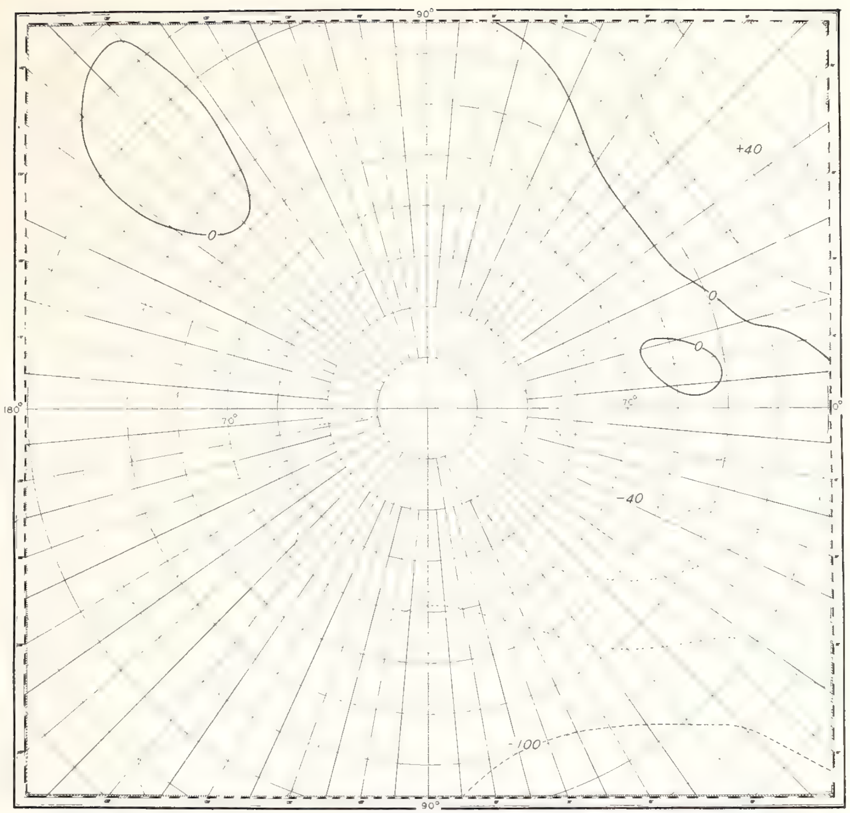

FIG. 141 (B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1922.5, NORTH POLAR REGION

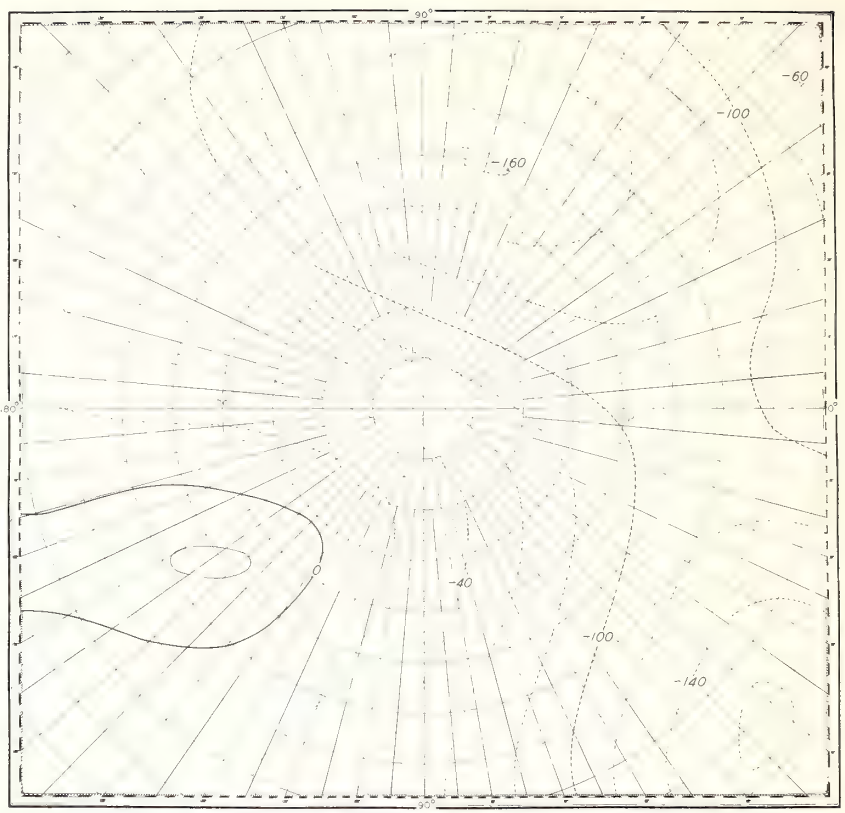

FIG. 141 (C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1922.5, SOUTH POLAR REGION

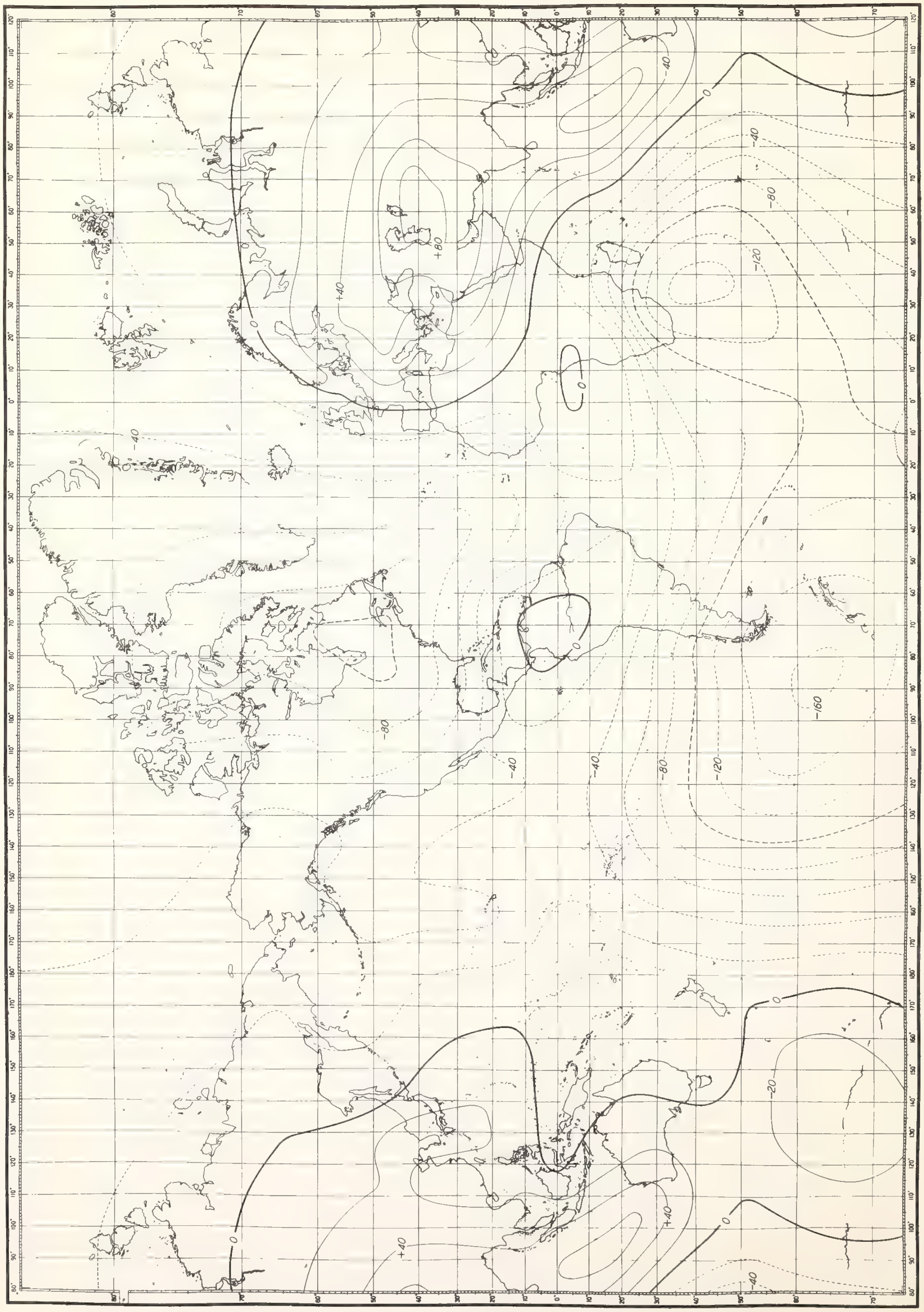

FIG. 142 (A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1932.5

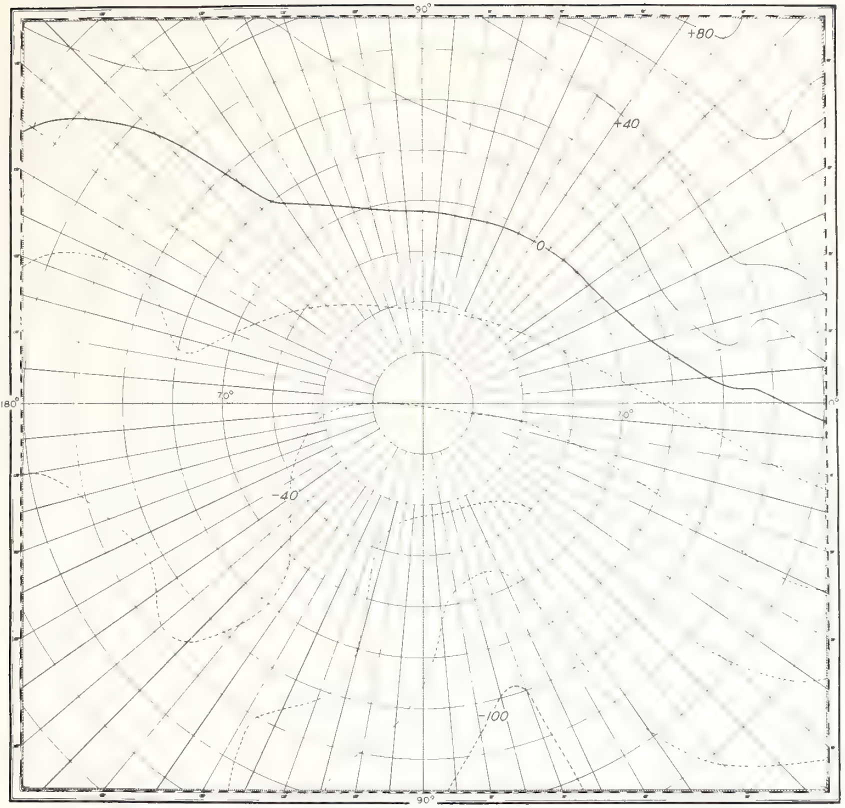

FIG. 142(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1932.5, NORTH POLAR REGION

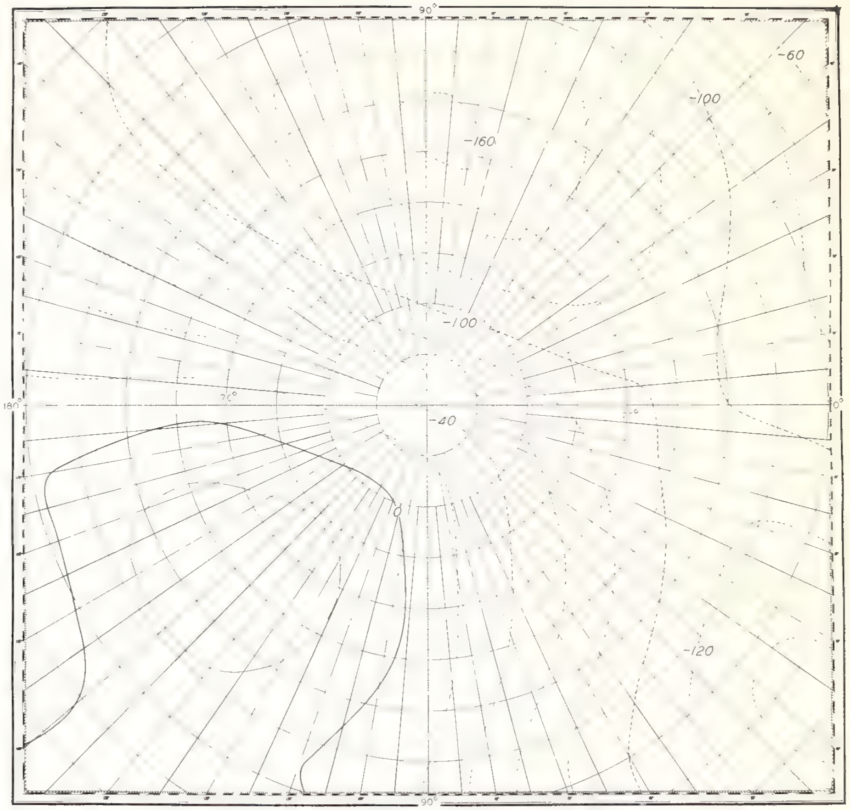

FIG. 142(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1932.5, SOUTH POLAR REGION

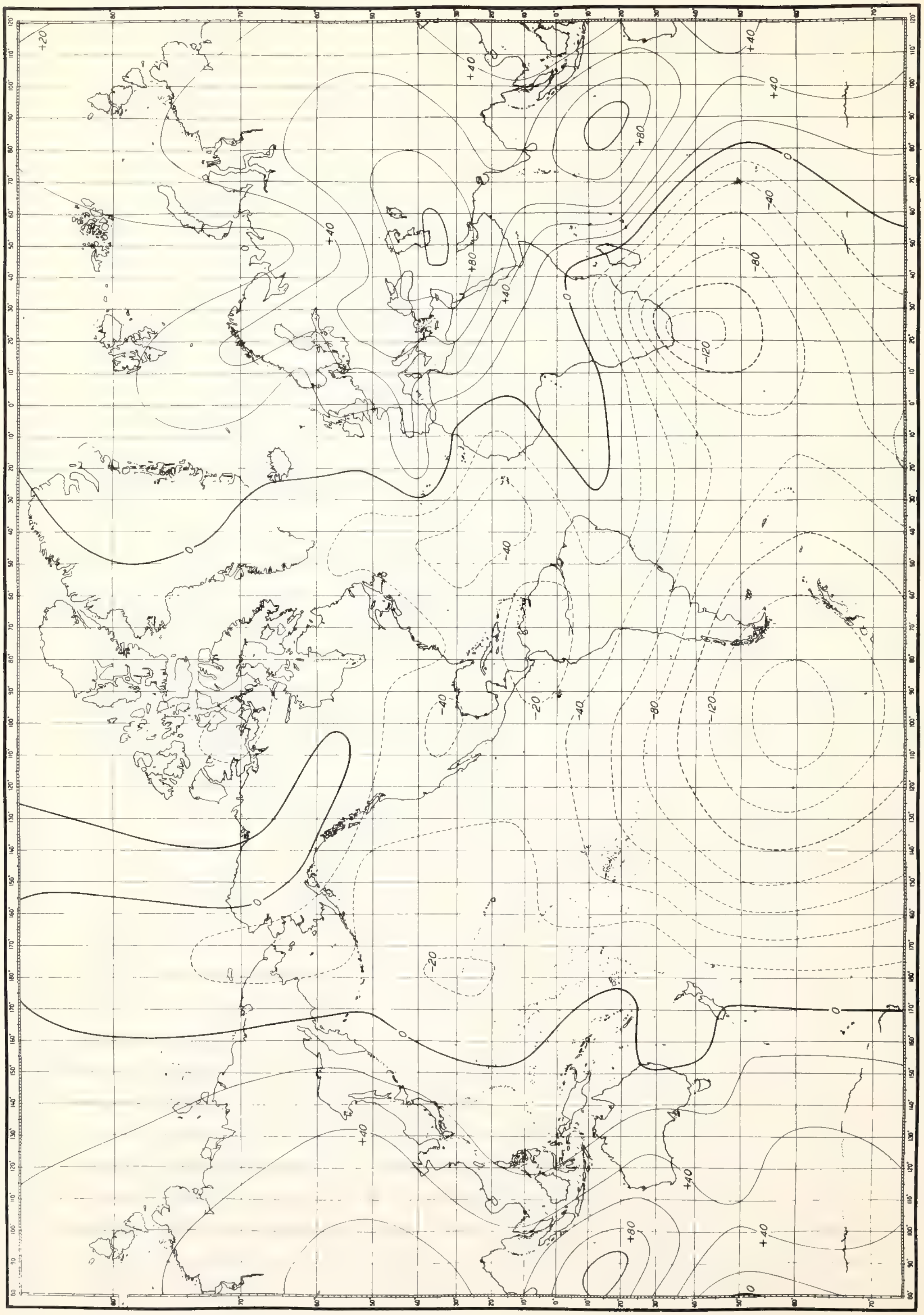

FIG. 143(A)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1942.5

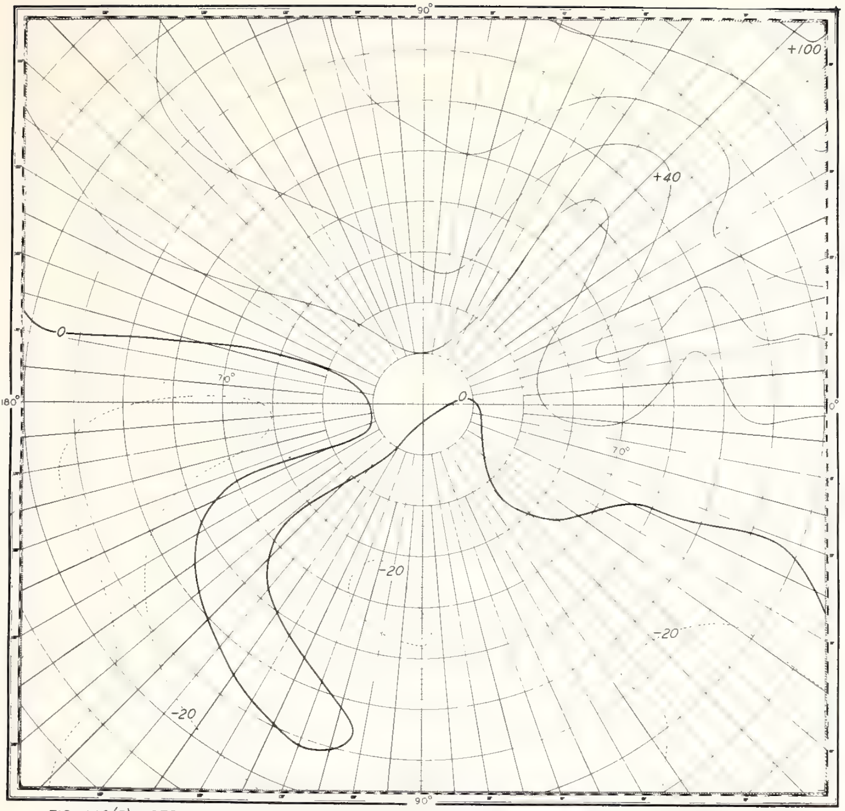

FIG. 143(B)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1942.5, NORTH POLAR REGION

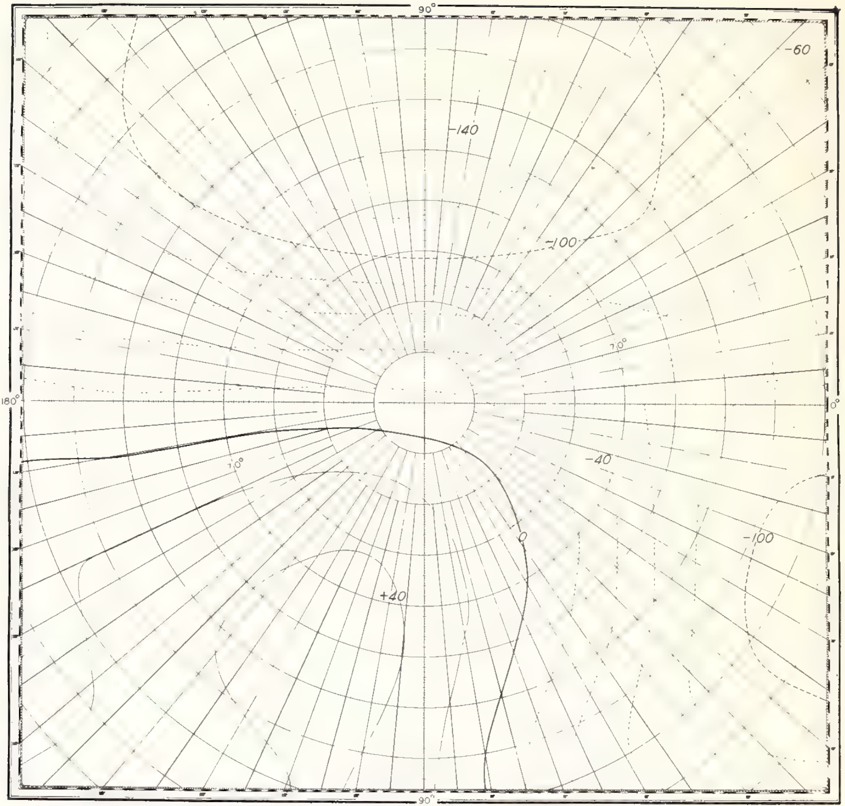

FIG. 143(C)—GEOMAGNETIC SECULAR CHANGE IN GAMMAS PER YEAR, TOTAL INTENSITY, EPOCH 1942.5, SOUTH POLAR REGION

CHAPTER VII

MAIN-FIELD CHARTS, EPOCH 1945

We next consider the application of isoporic charts in the construction of main-field charts for 1945.0.

1. Construction of main-field charts, seven elements.--The values on Form 19.1 (Figure 3-B, Chapter IV), derived from more than 100,000 individual observations at nearly 10,000 stations for D, and 5,000 stations for the other components, were entered on computing sheets. Scalings of secular change were made from the isoporic charts, to the nearest degree of latitude and longitude, as needed to reduce the corrected values of H, D, and Z to epoch 1945.0. The secular change was assumed constant for the 5-year period preceding or following the epoch of each isoporic chart.

Values of D, H, and Z reduced to epoch 1945.0 were next entered on sectional base-maps furnished by the United States Hydrographic Office. These comprised 15 large-scale partial Mercator projections and two polar grids on the azimuthal equidistant projection, for each element. For the remaining components, values only at magnetic observatories and selected repeat stations were entered, using the same world Mercator and polar base maps as for the isoporic charts, since the chart values for these components were computed from those for D, H, and Z. The distribution of stations used for declination has previously been indicated in Figure 2, Chapter II.

Charts in D and H were next completed, and then scaled at five-degree intervals of latitude and longitude. Values of X and Y were computed from the scaled values of D and H. Curl tests and line-integral tests as for the secular change were next applied; the procedures employed have already been described in the chapter on isoporic charts. The only adjustments to mutual consistence were made for regions south of - 50°. The values of curl and of the line-integrals of field are presented in Tables 44 and 45.

Following the procedure used for the isoporic charts, spherical harmonic analyses were made of the final X- and Y-charts, as well as of the preliminary Z-chart. Evidence for an external part of the field was not found; in fact, the calculated external part in the harmonic P°_1 was less than 100 gammas, and hence considerably less than that found in previous analyses.

The coefficients from X and Y were next used to compute values in Z for polar regions and over the oceans, with checks from the best observations on land. The computed values of Z are given in Table 46. Little use of them was made in the construction of the final chart in vertical intensity except for the south polar regions, where it was necessary to draw the line-configurations to a great extent from the computations. Finally, the surface integral in Z over the sphere was evaluated and found to be nearly zero.

The charts in X, Y, I, and F were constructed utilizing values of H, D, and Z taken generally at five-degree intervals of latitude and longitude, and at one-degree intervals in regions having more complex features of field. Additional values were obtained from reduced observatory data. The polar parts of the I-chart were constructed simultaneously with the polar Z-charts. The completed charts are shown in Figures 144 to 150 and values of the seven elements tabulated at five-degree intervals of geographic latitude and longitude are given in Tables 47 to 53.

Perhaps the most interesting difference between the charts just discussed and others previously issued is to be found in the smaller degree of smoothing of the isomagnetic lines. This may be attributed partly to the use of base maps of larger scale for plotting and construction and partly to the fact that the utilization of almost all the available observations made since 1905 facilitated the production of more detailed charts of secular change. Certain anomalies over the oceans which have not appeared in other world charts are indicated on these.

The great majority of the data on land and sea used in the construction of the isoporic and main-field charts was obtained by expeditions and cruises of the Carnegie Institution of Washington. These charts therefore furnish a résumé of this work which was supported by many other organizations who have contributed the remainder of the data. The study of other features of these charts will be given in a subsequent volume of this series, together with particulars respecting geomagnetic and allied geophysical fluctuations.

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Table 44

Values of line-integrals of east component ($a\int Y\sin\theta d\lambda$) and north component ($a\int Xd\theta$) of Earth's magnetic field for 1945 expressed in gauss-kilometers for various geographic parallels and meridians

λ	($a\int Xd\theta$)	ϕ	($a\int Y\sin\theta d\lambda$)
° °		°	
0 and 180	-82	+85	+ 7
5 and 185	-41	+80	+ 8
10 and 190	-52	+75	- 2
15 and 195	-15	+70	-12
20 and 200	-41	+65	0
25 and 205	-65	+60	-14
30 and 210	-71	+55	-18
35 and 215	-62	+50	-11
40 and 220	-64	+45	-18
45 and 225	-59	+40	+ 6
50 and 230	+ 6	+35	- 2
55 and 235	-96	+30	+ 6
60 and 240	-53	+25	- 1
65 and 245	-55	+20	+ 9
70 and 250	-31	+15	+14
75 and 255	-50	+10	+22
80 and 260	0	+ 5	+ 8
85 and 265	-33	0	-13
90 and 270	-70	- 5	+ 8
95 and 275	-38	-10	- 3
100 and 280	-55	-15	-26
105 and 285	+12	-20	+16
110 and 290	+16	-25	-24
115 and 295	+19	-30	+20
120 and 300	+31	-35	+18
125 and 305	+44	-40	+23
130 and 310	+48	-45	+ 2
135 and 315	+44	-50	- 9
140 and 320	+44	-55	-11
145 and 325	+22	-60	- 2
150 and 330	-20	-65	-14
155 and 335	-47	-70	-41
160 and 340	-21	-75	-49
165 and 345	-25	-80	-29
170 and 350	0	-85	- 8
175 and 355	+20		

Table 45

Values of $i=[dX/d\lambda+d(Y\sin\theta)/d\theta]$ cosec θ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	-120	0	0	+120	-120	0	0	0	+120
+80	- 58	- 58	-120	- 58	0	0	0	0	+ 58
+75	-160	- 77	- 39	- 77	-120	- 77	- 39	- 39	0
+70	0	0	- 58	- 29	- 58	- 58	0	- 29	- 29
+65	0	- 47	- 95	0	+ 24	0	+ 24	+ 24	+ 47
+60	0	+ 60	+ 20	- 40	0	0	0	- 40	- 20
+55	- 17	+ 17	+ 52	0	0	+ 35	+ 17	- 17	- 52
+50	+ 16	+ 16	+ 47	0	+ 31	+ 16	- 16	0	- 16
+45	0	0	+ 14	+ 14	- 28	0	- 28	0	0
+40	- 13	+ 13	- 26	+ 13	- 26	+ 26	0	- 13	0
+35	0	0	- 12	+ 12	+ 37	+ 24	0	- 12	- 12
+30	- 12	- 23	- 35	- 35	+ 12	+ 23	+ 12	- 12	0
+25	+ 22	- 44	- 66	- 44	+ 22	+ 44	+ 22	0	- 22
+20	+ 43	- 11	- 32	- 11	- 32	- 11	+ 11	+ 11	0
+15	0	- 21	- 31	+ 31	+ 21	0	0	+ 10	+ 31
+10	0	- 10	0	- 20	+ 10	+ 10	0	+ 20	+ 10
+ 5	- 20	0	- 20	- 30	- 20	+ 40	- 30	- 10	+ 10
0	- 10	- 20	- 40	- 20	+ 20	+ 20	0	+ 10	+ 20
- 5	- 10	- 10	- 40	- 30	- 20	0	+ 10	+ 30	+ 30
-10	- 30	0	- 30	- 30	0	- 10	+ 10	+ 10	+ 41
-15	+ 31	0	0	0	- 21	+ 10	0	- 31	- 31
-20	+ 32	+ 32	0	- 32	- 53	+ 21	+ 32	- 11	- 32
-25	0	+ 33	+ 33	0	- 33	- 33	+ 44	+ 44	- 11
-30	- 23	0	+ 23	0	+ 12	- 12	0	0	0
-35	- 24	- 24	0	+ 24	- 12	- 24	- 12	+ 12	0
-40	0	- 13	- 26	0	+ 13	- 26	- 26	- 39	- 52
-45	- 28	- 28	- 42	- 42	- 28	0	- 14	0	- 14
-50	0	- 26	- 26	- 26	- 13	0	0	0	- 13
-55	- 52	- 35	- 17	0	+ 52	0	+ 35	- 35	- 70
-60	-100	- 80	- 80	- 60	- 80	-120	- 40	- 60	0
-65	-170	- 95	-140	- 95	-140	- 71	- 47	- 24	+ 47
-70	-230	-200	- 88	- 88	0	0	0	0	0
-75	- 77	- 77	+ 39	0	- 39	0	0	0	0
-80	- 58	0	0	0	+ 58	+120	-170	0	+170
-85	0	0	0	0	0	0	0	0	0

[a] North latitudes positive, south latitudes negative

Table 45--Continued

Values of $f=[dX/d\lambda+d(Y\sin\theta)/d\theta]\ \mathrm{cosec}\ \theta$ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	+120	+120	0	-120	-230	-120	-460	-460	-230
+80	+120	+120	- 58	-120	- 58	-120	0	0	0
+75	+ 39	0	- 39	- 39	0	0	0	- 39	-160
+70	0	- 58	0	+ 29	+ 29	- 29	- 58	- 58	+120
+65	- 24	0	+ 24	0	0	0	0	+ 24	+ 47
+60	0	-100	0	0	- 20	+ 20	- 20	0	0
+55	- 35	0	0	0	0	0	+ 17	0	0
+50	- 16	+ 47	- 31	0	+ 16	0	0	0	0
+45	- 28	- 28	+ 14	0	- 14	- 42	0	+ 14	0
+40	+ 26	+ 13	- 13	- 13	0	+ 13	+ 39	+ 39	+ 26
+35	+ 24	- 12	- 37	- 37	+ 24	0	0	+ 24	0
+30	+ 12	- 12	- 12	- 23	- 12	+ 23	- 23	0	0
+25	- 22	- 22	0	0	0	0	0	+ 33	- 11
+20	+ 11	0	0	- 21	0	- 11	- 11	- 11	- 11
+15	+ 31	0	0	- 41	- 21	- 10	0	0	0
+10	+ 30	+ 20	+ 41	+ 10	- 30	- 30	0	- 10	+ 10
+ 5	+ 10	+ 50	+ 30	- 20	- 30	- 20	0	0	+ 10
0	0	- 30	0	+ 20	- 30	- 20	- 20	+ 10	+ 50
- 5	0	- 40	- 20	0	0	- 20	- 20	+ 10	+ 30
-10	0	- 81	- 20	+ 10	+ 20	- 20	- 30	+ 20	+ 20
-15	+ 10	- 10	- 21	0	- 21	- 10	+ 31	+ 10	+ 21
-20	0	+ 43	0	- 21	- 32	+ 21	+ 32	+ 21	+ 43
-25	0	+ 22	+ 33	+ 22	+ 11	+ 55	+ 11	+ 11	+ 33
-30	+ 12	0	0	0	+ 23	+ 35	0	0	+ 35
-35	+ 24	+ 24	+ 12	+ 24	- 12	+ 12	+ 24	+ 24	+ 24
-40	- 26	+ 13	+ 26	+ 26	0	0	0	+ 13	0
-45	+ 14	+ 14	- 14	0	+ 28	0	+ 14	0	0
-50	- 13	- 13	- 13	- 26	- 26	0	- 52	+ 13	+ 65
-55	-100	0	0	- 17	- 17	0	0	0	+ 35
-60	+ 20	0	0	- 20	0	0	0	0	0
-65	0	0	0	0	0	0	0	0	0
-70	0	0	0	0	0	0	0	0	- 88
-75	0	0	0	0	- 39	+ 39	+ 39	0	- 39
-80	0	0	0	0	0	0	0	0	0
-85	0	0	0	0	0	0	0	0	+120

[a] North latitudes positive, south latitudes negative

Table 45--Continued

Values of $f=[dX/d\lambda+d(Y\sin\theta)/d\theta]\ \mathrm{cosec}\ \theta$ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	+340	+230	+340	+230	+340	+230	+230	+340	+120
+80	+230	+170	+120	+ 58	+ 58	0	0	+120	+230
+75	+ 39	+ 77	+ 39	0	+ 39	+ 39	- 39	-120	-160
+70	+120	+ 88	+ 29	0	- 29	- 58	- 58	- 88	- 29
+65	0	+ 24	+ 24	- 24	- 71	- 71	- 47	+ 71	+ 47
+60	+ 40	- 40	- 40	- 20	- 60	- 20	- 60	0	- 40
+55	0	0	- 17	- 52	- 35	+ 17	+ 52	+ 35	- 35
+50	0	- 31	- 62	- 16	- 47	- 47	- 31	0	+ 16
+45	- 14	0	0	+ 14	0	0	+ 42	0	- 14
+40	- 13	- 13	- 26	- 13	+ 13	0	+ 13	- 13	0
+35	0	+ 24	+ 24	0	0	- 12	- 24	+ 37	- 12
+30	0	0	0	- 12	- 12	+ 12	+ 23	- 12	0
+25	0	- 11	0	- 11	0	0	0	0	+ 11
+20	+ 11	+ 11	0	0	+ 11	- 32	0	0	0
+15	- 10	+ 21	+ 10	0	- 10	0	- 21	+ 21	0
+10	+ 20	+ 30	0	- 10	0	0	- 10	0	0
+ 5	+ 10	- 20	+ 10	0	+ 10	- 10	- 10	- 10	0
0	+ 20	- 30	0	0	+ 10	0	- 10	- 30	0
- 5	+ 20	0	0	+ 20	0	- 10	0	0	0
-10	+ 20	- 10	+ 10	+ 30	0	- 41	- 20	+ 20	+ 10
-15	0	- 21	0	- 21	- 21	- 10	+ 10	+ 31	+ 21
-20	+ 32	+ 11	- 43	0	0	+ 21	+ 11	0	+ 21
-25	+ 33	+ 33	+ 11	- 22	- 22	+ 22	+ 33	+ 11	0
-30	+ 46	+ 46	+ 12	0	+ 23	- 23	- 23	0	+ 23
-35	+ 24	+ 37	+ 12	- 12	+ 37	+ 12	- 37	- 12	0
-40	0	+ 26	- 39	0	0	0	+ 13	0	0
-45	+ 42	0	- 14	- 28	+ 14	+228	+ 42	0	+ 42
-50	+ 39	0	0	0	+ 26	+ 13	+ 13	+ 13	+ 26
-55	+ 17	+ 17	0	0	- 35	+ 52	+ 52	0	0
-60	0	- 40	- 60	0	+ 40	+ 60	+ 60	+100	+ 40
-65	0	0	0	0	+ 47	+ 47	- 24	- 24	0
-70	- 58	+ 88	+ 58	0	- 88	0	0	- 88	-180
-75	0	0	0	+190	+230	0	+ 39	+120	0
-80	+ 58	- 58	+120	+120	0	0	0	+120	+120
-85	0	0	+230	+340	+340	+340	0	0	+120

[a] North latitudes positive, south latitudes negative

Table 45--Continued

Values of $f=[dX/d\lambda+d(Y\sin\theta)/d\theta]\ \mathrm{cosec}\ \theta$ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	+120	+240	0	-120	0	-230	-230	-230	0
+80	+120	0	-230	-120	-120	-120	- 58	-120	-120
+75	- 39	- 39	0	-120	- 77	- 39	- 39	0	- 77
+70	0	+ 29	- 29	- 58	0	0	+ 29	0	+ 58
+65	+ 47	+ 47	0	- 47	- 24	- 24	0	0	- 24
+60	- 20	0	- 40	0	+ 40	0	+ 20	+ 60	0
+55	- 35	- 17	0	+ 35	+ 52	0	0	0	0
+50	- 31	- 16	0	0	+ 16	+ 78	+ 62	+ 62	+ 47
+45	+ 14	+ 14	0	0	- 57	- 28	+ 57	0	0
+40	0	0	- 13	- 39	- 13	- 13	- 13	0	- 13
+35	0	+ 24	0	- 37	+ 37	+ 12	+ 12	+ 24	0
+30	0	+ 35	0	- 23	- 46	- 12	0	0	+ 12
+25	0	+ 11	+ 33	+ 11	- 44	- 11	0	0	0
+20	- 11	+ 11	+ 21	0	+ 11	0	- 11	0	- 11
+15	0	- 10	- 31	+ 21	+ 21	+ 10	- 31	- 10	0
+10	0	- 10	0	+ 10	0	0	0	0	- 10
+ 5	- 10	+ 30	+ 30	0	0	- 30	+ 10	0	+ 20
0	0	0	0	0	0	0	- 10	0	+ 10
- 5	0	- 10	- 40	0	+ 20	+ 10	- 20	- 20	+ 10
-10	0	- 41	0	0	0	0	- 20	- 10	- 10
-15	+ 10	0	- 21	- 10	+ 21	+ 10	- 10	+ 10	- 21
-20	+ 21	- 21	- 32	0	+ 11	+ 11	0	0	0
-25	- 44	0	+ 11	0	+ 11	0	+ 22	+ 22	+ 22
-30	0	+ 12	0	- 12	-112	0	0	- 12	+ 12
-35	+ 37	+ 12	+ 12	0	+ 24	- 12	- 12	- 49	- 12
-40	- 13	- 26	- 26	- 39	- 39	- 26	- 26	+ 26	0
-45	0	- 28	- 57	- 28	0	0	+ 42	0	- 57
-50	0	- 26	- 13	+ 13	+ 13	0	0	0	- 13
-55	0	+ 35	+ 17	+ 35	+ 35	+ 35	0	0	0
-60	0	- 20	0	0	0	0	0	0	0
-65	- 24	0	- 47	-120	-190	- 47	0	0	+ 24
-70	- 88	-200	-260	-120	0	+ 88	0	0	0
-75	-120	-190	-120	+ 39	+120	+270	+120	+ 39	+ 39
-80	+ 58	0	0	0	+120	+230	+230	+230	+290
-85	+230	0	0	0	0	0	0	-120	-120

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[a] North latitudes positive, south latitudes negative

Table 45--Continued

Values of $f=[dX/d\lambda+d(Y\sin\theta)/d\theta]$ cosec θ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	0	+120	+340	+120	+230	+120	+120	0	-340
+80	0	+ 58	+ 58	+ 58	+ 58	0	0	0	0
+75	- 77	- 39	0	0	- 39	- 39	0	0	0
+70	- 88	0	0	+ 29	+ 58	0	0	0	- 58
+65	- 71	- 24	0	0	+ 24	+ 24	- 95	0	0
+60	- 40	- 20	- 20	- 20	+ 40	+ 20	0	- 80	- 60
+55	0	+ 17	+ 17	-100	+ 17	+ 17	+ 17	0	+ 52
+50	0	- 62	- 16	- 31	+ 16	0	+ 47	+ 62	0
+45	+ 71	+ 28	- 28	0	+ 14	+ 42	+ 42	+ 28	0
+40	+ 13	0	+ 13	- 13	0	+ 13	0	- 13	+ 26
+35	0	+ 24	+ 12	0	0	0	0	0	- 24
+30	0	0	- 23	0	- 23	- 12	0	+ 35	+ 23
+25	0	0	0	- 11	- 22	0	+ 33	+ 22	+ 22
+20	- 32	- 21	+ 11	- 21	- 21	+ 11	+ 32	- 11	0
+15	- 10	0	+ 31	+ 31	- 10	- 31	0	- 10	0
+10	0	+ 30	0	- 30	- 41	+ 10	0	- 10	0
+ 5	0	- 10	- 20	- 30	- 30	+ 30	+ 50	+ 50	+ 20
0	0	0	0	0	+ 10	+ 30	0	0	0
- 5	+ 10	+ 30	0	0	- 10	- 20	- 10	- 10	0
-10	0	+ 30	0	- 30	- 10	0	+ 20	- 10	+ 10
-15	0	0	- 10	0	- 21	- 10	- 10	- 10	+ 21
-20	0	- 21	- 21	- 32	+ 11	+ 11	0	+ 32	0
-25	- 22	- 44	- 22	- 22	0	+ 22	+ 44	+ 33	+ 11
-30	- 35	- 12	- 23	+ 12	- 12	+ 12	+ 12	0	- 12
-35	- 12	- 12	- 24	+ 24	0	- 12	- 24	+ 12	- 24
-40	- 26	- 13	- 52	- 39	- 13	+ 13	0	+ 26	0
-45	- 28	+ 14	+ 14	0	+ 57	+ 42	+ 28	+ 14	+ 28
-50	+ 26	0	0	0	- 13	+ 13	+ 13	+ 13	+ 26
-55	+ 70	+ 17	0	- 17	- 35	- 52	- 35	0	0
-60	0	0	0	0	0	0	- 80	- 40	- 40
-65	0	0	0	0	0	0	0	- 24	0
-70	0	0	0	+ 58	0	- 29	- 29	0	0
-75	0	0	0	- 39	- 77	-120	-120	-120	-120
-80	0	0	0	+170	+230	+120	0	0	- 58
-85	0	+120	0	+120	0	+120	0	0	0

[a] North latitudes positive, south latitudes negative

Table 45--Continued

Values of f=[dX/dλ+d(Ysinθ)/dθ] cosec θ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	-460	-460	-460	-340	-120	-120	0	+230	+340
+80	0	- 58	+ 58	+ 58	+ 58	-120	-170	-120	+120
+75	+ 39	0	0	0	+ 39	+ 39	+ 77	0	- 39
+70	0	0	+ 88	+ 88	+ 29	+ 58	+ 29	+ 58	0
+65	+ 71	+ 24	- 47	0	+ 71	+ 47	0	0	+ 47
+60	0	+ 40	+ 20	- 40	- 40	- 40	+ 40	0	0
+55	+ 35	+ 35	+ 17	0	+ 17	- 17	0	0	0
+50	- 16	- 16	0	0	- 16	0	- 16	0	0
+45	- 14	- 14	0	0	0	0	0	0	+ 14
+40	+ 39	- 26	+ 26	- 13	- 39	- 26	+ 13	0	- 13
+35	+ 24	- 24	- 37	- 24	- 49	0	+ 24	- 24	0
+30	+ 12	+ 23	0	- 35	0	0	0	- 35	+ 12
+25	- 11	+ 22	+ 11	0	+ 22	0	- 11	- 22	0
+20	+ 11	+ 11	0	0	+ 32	- 11	+ 21	0	0
+15	+ 21	+ 31	+ 21	+ 10	+ 10	+ 10	+ 21	0	- 10
+10	+ 10	0	- 10	- 20	0	0	+ 30	+ 30	+ 10
+ 5	- 10	- 30	- 20	- 20	0	+ 10	+ 20	+ 10	- 10
0	- 10	- 10	- 20	0	+ 50	+ 10	0	- 30	- 50
- 5	+ 10	+ 30	+ 20	+ 20	+ 20	+ 10	- 10	- 40	0
-10	+ 20	+ 10	0	0	+ 20	- 10	- 10	0	+ 20
-15	+ 31	0	- 10	- 10	- 21	- 21	0	+ 31	- 10
-20	- 43	+ 11	+ 21	+ 11	- 32	- 32	+ 11	- 11	- 21
-25	- 44	- 11	+ 33	0	- 22	- 44	+ 33	- 33	- 22
-30	- 23	- 12	- 23	- 12	- 12	- 12	+ 35	0	- 23
-35	0	- 12	0	+ 12	0	- 12	0	- 24	0
-40	- 26	- 13	0	0	0	- 26	- 39	- 26	- 26
-45	+ 28	0	0	0	0	0	0	0	0
-50	- 13	+ 26	+ 13	- 13	- 13	0	- 26	- 13	0
-55	- 17	0	- 17	0	0	0	- 35	- 35	- 35
-60	- 80	- 60	- 20	- 40	- 20	- 20	0	+ 20	0
-65	0	0	0	0	0	0	+ 24	+ 24	+ 24
-70	- 58	0	0	0	0	- 29	0	+ 29	+ 29
-75	-120	- 77	- 77	- 39	- 39	0	0	0	0
-80	-120	- 58	-120	-120	- 58	- 58	- 58	0	0
-85	0	0	+120	+120	0	0	0	0	0

[a] North latitudes positive, south latitudes negative

Table 45--Continued

Values of f=[dX/dλ+d(Ysinθ)/dθ] cosec θ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	+120	+120	+230	+120	+120	0	-120	+120	-120
+80	+ 58	- 58	-170	-230	-120	+120	+120	+ 58	0
+75	0	+120	+ 39	+120	+120	- 39	-190	- 77	- 39
+70	- 29	+ 29	+ 29	+ 58	+120	+120	+120	- 58	- 88
+65	+ 24	0	0	0	+ 24	0	+120	+ 71	- 47
+60	- 60	0	+ 60	- 40	0	0	- 20	0	+ 20
+55	0	- 52	+ 35	+ 52	+ 17	0	- 35	+ 52	0
+50	+ 62	+ 16	- 31	- 16	+ 31	- 16	- 31	+ 16	+ 16
+45	+ 42	0	- 28	0	+ 40	+ 42	+ 42	+ 14	0
+40	0	- 52	0	+ 26	+ 26	- 13	- 13	+ 26	- 26
+35	+ 49	0	+ 49	+ 12	0	+ 12	- 24	- 24	- 12
+30	+ 23	+ 23	+ 35	+ 23	0	- 35	- 12	- 23	+ 12
+25	- 33	+ 33	- 22	0	+ 22	- 22	- 33	- 44	0
+20	+ 21	- 21	- 32	+ 11	+ 32	- 32	+ 11	- 11	0
+15	- 10	+ 10	+ 31	0	0	- 21	- 31	0	0
+10	0	+ 10	- 20	+ 10	- 20	- 20	0	0	+ 20
+ 5	- 10	0	- 10	+ 20	- 20	+ 20	+ 10	0	+ 10
0	- 10	- 20	+ 10	- 10	- 10	- 10	0	0	+ 20
- 5	+ 20	0	- 10	- 20	0	0	+ 10	0	- 10
-10	0	- 30	- 20	0	+ 20	- 10	+ 10	+ 10	0
-15	- 21	- 21	+ 10	+ 21	+ 21	- 10	0	+ 21	0
-20	- 11	+ 43	+ 11	0	0	0	- 11	0	+ 11
-25	- 22	+ 44	+ 22	- 22	- 33	+ 22	+ 11	- 11	+ 11
-30	0	+ 12	+ 12	0	- 35	+ 12	- 12	0	0
-35	- 12	- 24	- 24	+ 37	+ 49	0	0	+ 24	+ 24
-40	- 39	+ 13	+ 26	0	+ 26	+ 13	- 39	+ 26	- 13
-45	0	0	0	- 14	- 14	- 42	- 14	+ 28	+ 14
-50	0	0	0	0	0	- 13	+ 13	+ 13	+ 13
-55	- 17	0	0	+ 17	- 17	0	0	0	0
-60	0	0	- 20	0	+ 20	- 80	0	- 20	- 40
-65	0	0	0	+ 47	+ 24	+ 24	+140	+120	+ 71
-70	0	- 28	0	0	+ 28	+120	+150	+ 88	+150
-75	- 77	+ 39	0	0	0	+ 39	+ 77	+ 77	+120
-80	- 58	0	0	0	0	0	0	0	+ 58
-85	0	0	0	0	0	0	+120	0	+120

[a] North latitudes positive, south latitudes negative

Table 45--Concluded

Values of $f=[dX/d\lambda+d(Y\sin\theta)/d\theta]$ cosec θ for 1945 expressed in gammas per degree of arc, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	0	0	0	+120	0	0	+120	0	-120
+80	0	0	- 58	- 58	0	+120	+230	+120	+120
+75	0	- 77	- 77	-160	0	+120	+120	0	0
+70	- 58	- 29	0	+120	+ 58	0	0	- 29	- 88
+65	- 47	- 24	0	0	- 24	- 24	+ 24	+ 71	+ 24
+60	- 60	- 40	- 60	- 80	+ 60	+ 40	- 20	- 40	- 60
+55	0	- 35	- 87	- 52	- 17	0	+ 52	- 17	- 70
+50	+ 31	+ 31	0	0	0	- 16	- 31	+ 62	+ 62
+45	+ 14	+ 28	+ 14	0	- 14	0	0	0	0
+40	- 26	+ 26	0	- 39	+ 13	0	- 13	- 52	- 26
+35	0	- 37	0	+ 12	- 24	- 37	- 37	+ 37	+ 12
+30	+ 23	0	+ 23	- 46	- 23	0	0	+ 12	+ 46
+25	+ 22	- 11	- 11	- 33	0	+ 11	+ 44	+ 33	+ 11
+20	- 32	- 11	0	0	0	- 21	- 21	0	- 11
+15	0	0	0	0	- 21	+ 31	- 21	- 21	- 31
+10	0	- 10	- 20	0	- 30	- 30	- 30	- 41	- 30
+ 5	0	+ 10	0	+ 10	+ 10	- 20	- 10	- 20	- 50
0	- 30	- 10	+ 10	+ 40	+ 30	0	0	0	- 30
- 5	- 10	0	0	+ 30	+ 40	+ 10	- 20	+ 10	- 30
-10	- 10	0	+ 20	+ 10	+ 20	+ 30	- 10	0	0
-15	+ 31	+ 10	+ 21	0	+ 10	- 10	+ 21	+ 31	+ 41
-20	+ 32	- 11	- 32	+ 32	+ 74	+ 11	+ 11	- 11	+ 43
-25	+ 33	0	- 11	+ 33	+ 44	+ 11	- 11	+ 11	- 11
-30	0	0	0	+ 23	+ 46	+ 35	0	0	- 35
-35	0	0	0	- 24	+ 12	+ 37	- 12	0	+ 12
-40	- 26	- 26	0	+ 26	+ 13	- 13	- 39	- 13	- 26
-45	- 28	0	0	- 14	0	- 28	0	- 14	- 42
-50	+ 13	- 13	0	0	- 13	- 26	+ 13	0	0
-55	0	0	0	+ 17	0	+ 17	0	0	+ 17
-60	- 20	0	- 20	0	0	0	- 20	- 80	-120
-65	0	0	0	- 95	-140	-140	-140	-170	-190
-70	+290	+ 58	0	0	-180	-200	-180	-180	-200
-75	+160	+ 77	+ 39	0	- 77	- 39	-120	-120	-120
-80	+120	+170	0	+ 58	+170	0	0	0	+ 58
-85	-120	+120	0	0	0	0	0	0	+120

[a] North latitudes positive, south latitudes negative

Table 46

Geomagnetic vertical intensity for 1945, expressed in 100-gamma units computed from spherical harmonic analyses of north and east intensity

Latitude	Longitude											
	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°	360°
+80	+538	+556	+576	+587	+587	+583	+581	+580	+573	+557	+540	+533
+70	+506	+542	+586	+601	+580	+559	+568	+590	+588	+555	+515	+496
+60	+474	+521	+581	+590	+536	+498	+528	+588	+602	+553	+491	+464
+50	+436	+485	+545	+541	+460	+417	+469	+560	+594	+538	+457	+425
+40	+374	+421	+468	+451	+364	+336	+398	+499	+551	+501	+402	+361
+30	+275	+321	+345	+329	+263	+262	+320	+403	+468	+441	+324	+263
+20	+140	+185	+187	+187	+158	+185	+230	+286	+355	+358	+228	+139
+10	- 9	+ 28	+ 11	+ 35	+ 43	+ 89	+127	+162	+228	+259	+127	+ 10
0	-143	-121	-158	-121	- 87	- 33	+ 13	+ 45	+104	+152	+ 30	-103
-10	-239	-236	-298	-270	-227	-170	-108	- 64	- 7	+ 49	- 53	-185
-20	-288	-303	-397	-405	-366	-303	-224	-165	-103	- 43	-119	-236
-30	-306	-338	-459	-510	-481	-416	-336	-267	-187	-115	-163	-260
-40	-311	-361	-499	-586	-571	-508	-435	-363	-265	-178	-199	-273
-50	-330	-395	-531	-632	-634	-582	-522	-449	-341	-246	-241	-291
-60	-376	-448	-564	-656	-673	-639	-590	-519	-417	-327	-304	-333
-70	-445	-509	-593	-660	-683	-667	-629	-568	-489	-421	-393	-406
-80	-524	-562	-606	-641	-657	-653	-630	-594	-551	-515	-497	-501

Table 47

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	- 23.8	- 21.0	- 16.0	- 9.5	- 4.9	- 2.0	+ 2.0	+ 4.5	+ 8.0
+80	- 13.1	- 10.0	- 7.2	- 4.5	- 0.4	+ 3.7	+ 7.8	+ 11.6	+ 15.2
+75	- 12.0	- 10.0	- 6.4	- 2.8	+ 0.8	+ 4.0	+ 7.2	+ 10.7	+ 15.2
+70	- 13.0	- 9.2	- 6.0	- 3.1	- 0.2	+ 3.4	+ 6.6	+ 9.4	+ 13.2
+65	- 12.5	- 8.7	- 6.0	- 3.6	- 0.2	+ 4.0	+ 6.7	+ 8.9	+ 11.7
+60	- 11.0	- 8.7	- 6.2	- 2.8	+ 0.1	+ 3.2	+ 5.3	+ 8.5	+ 9.4
+55	- 10.7	- 9.0	- 5.6	- 2.0	- 0.7	+ 1.7	+ 3.7	+ 5.6	+ 7.8
+50	- 9.2	- 7.0	- 4.6	- 2.2	- 0.4	+ 1.6	+ 2.8	+ 4.9	+ 5.8
+45	- 8.4	- 6.4	- 4.5	- 2.4	- 0.8	+ 1.2	+ 2.7	+ 3.8	+ 5.1
+40	- 8.5	- 6.4	- 4.4	- 2.6	- 0.9	+ 0.6	+ 1.8	+ 3.0	+ 4.1
+35	- 8.4	- 6.4	- 4.5	- 2.7	- 1.2	+ 0.2	+ 1.3	+ 2.2	+ 3.1
+30	- 8.1	- 6.3	- 4.7	- 3.0	- 1.6	- 0.3	+ 0.6	+ 1.4	+ 2.0
+25	- 8.8	- 6.7	- 4.8	- 3.4	- 1.8	- 0.7	+ 0.1	+ 0.8	+ 1.4
+20	- 8.7	- 7.0	- 5.2	- 3.8	- 2.4	- 1.3	- 0.5	+ 0.3	+ 0.9
+15	- 9.8	- 7.7	- 5.9	- 3.9	- 2.8	- 1.8	- 0.9	- 0.2	+ 0.3
+10	- 10.7	- 8.6	- 6.6	- 4.9	- 3.6	- 2.4	- 1.5	- 0.8	- 0.4
+ 5	- 12.1	- 10.0	- 7.9	- 6.1	- 4.5	- 3.5	- 2.7	- 1.7	- 0.9
0	- 14.3	- 11.9	- 9.6	- 7.6	- 6.1	- 4.6	- 3.8	- 2.7	- 1.8
- 5	- 16.6	- 14.3	- 11.9	- 10.1	- 7.9	- 6.4	- 5.2	- 3.6	- 2.7
-10	- 19.3	- 17.2	- 14.8	- 12.6	- 10.5	- 8.8	- 6.9	- 5.2	- 4.2
-15	- 22.2	- 19.8	- 17.8	- 15.2	- 13.3	- 11.5	- 9.3	- 7.8	- 6.3
-20	- 24.6	- 22.8	- 20.7	- 18.4	- 16.6	- 14.1	- 12.1	- 10.3	- 10.1
-25	- 26.7	- 25.5	- 23.4	- 21.2	- 19.7	- 17.3	- 15.3	- 14.0	- 13.9
-30	- 28.0	- 27.3	- 25.9	- 24.4	- 22.4	- 20.0	- 18.2	- 17.6	- 17.7
-35	- 28.8	- 28.3	- 27.4	- 25.8	- 24.0	- 22.3	- 20.6	- 20.0	- 20.5
-40	- 28.2	- 28.5	- 28.2	- 26.7	- 25.2	- 24.5	- 23.8	- 24.0	- 25.0
-45	- 27.0	- 27.8	- 27.6	- 26.8	- 26.1	- 26.0	- 26.3	- 27.2	- 28.8
-50	- 25.9	- 26.5	- 26.7	- 26.7	- 26.7	- 26.8	- 27.2	- 28.4	- 30.3
-55	- 23.0	- 25.0	- 26.4	- 27.4	- 27.9	- 28.6	- 29.4	- 30.9	- 33.9
-60	- 23.2	- 25.4	- 27.3	- 28.8	- 30.1	- 32.2	- 35.2	- 37.6	- 40.4
-65	- 24.8	- 27.1	- 29.6	- 32.4	- 35.1	- 37.8	- 40.4	- 42.7	- 44.4
-70	- 27.0	- 30.4	- 33.8	- 36.8	- 40.0	- 42.6	- 45.0	- 47.4	- 50.0
-75	- 30.0	- 33.2	- 37.4	- 40.0	- 44.6	- 47.6	- 50.7	- 53.4	- 56.0
-80	- 30.5	- 35.9	- 40.5	- 44.8	- 49.5	- 53.9	- 57.5	- 61.7	- 65.0
-85	- 32.0	- 37.0	- 42.0	- 47.0	- 52.0	- 57.0	- 62.0	- 67.0	- 72.0

[a] North latitudes positive, south latitudes negative

Table 47--Continued

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	+ 12.0	+ 15.9	+ 20.0	+ 26.8	+ 33.0	+ 40.5	+ 47.0	+ 54.0	+ 60.5
+80	+ 18.2	+ 22.0	+ 25.5	+ 30.1	+ 36.0	+ 42.0	+ 44.8	+ 46.0	+ 46.9
+75	+ 19.1	+ 21.9	+ 24.3	+ 26.8	+ 29.3	+ 32.8	+ 35.0	+ 33.7	+ 30.5
+70	+ 16.8	+ 19.2	+ 20.9	+ 23.0	+ 24.2	+ 25.3	+ 25.8	+ 25.2	+ 24.3
+65	+ 14.2	+ 16.5	+ 18.3	+ 19.2	+ 20.2	+ 20.8	+ 21.2	+ 21.1	+ 20.1
+60	+ 11.2	+ 13.7	+ 14.3	+ 14.6	+ 15.6	+ 15.7	+ 15.0	+ 14.3	+ 13.2
+55	+ 10.2	+ 9.6	+ 10.8	+ 12.2	+ 12.3	+ 12.3	+ 11.6	+ 11.0	+ 9.7
+50	+ 7.6	+ 8.4	+ 8.4	+ 9.1	+ 9.1	+ 9.2	+ 8.7	+ 7.8	+ 5.9
+45	+ 6.0	+ 6.9	+ 6.9	+ 6.8	+ 6.9	+ 6.5	+ 5.4	+ 5.0	+ 4.3
+40	+ 4.6	+ 5.0	+ 5.3	+ 5.3	+ 5.0	+ 4.4	+ 3.8	+ 3.0	+ 2.2
+35	+ 3.6	+ 3.7	+ 3.8	+ 3.6	+ 3.3	+ 2.8	+ 2.2	+ 1.6	+ 1.0
+30	+ 2.6	+ 2.7	+ 2.7	+ 2.3	+ 1.9	+ 1.4	+ 0.6	+ 0.1	- 0.3
+25	+ 1.7	+ 1.9	+ 1.7	+ 1.3	+ 0.8	+ 0.3	- 0.4	- 1.0	- 1.2
+20	+ 1.2	+ 1.3	+ 1.0	+ 0.5	- 0.1	- 0.6	- 1.2	- 1.7	- 1.8
+15	+ 0.6	+ 0.7	+ 0.3	- 0.3	- 1.0	- 1.6	- 2.2	- 2.4	- 2.4
+10	0.0	+ 0.2	- 0.2	- 1.2	- 2.0	- 2.9	- 3.1	- 3.1	- 2.9
+ 5	- 0.6	- 0.5	- 1.0	- 2.4	- 3.3	- 4.0	- 4.3	- 4.3	- 3.7
0	- 1.3	- 1.3	- 2.3	- 3.7	- 4.7	- 5.4	- 5.6	- 5.5	- 4.5
- 5	- 2.3	- 2.5	- 3.9	- 5.5	- 6.6	- 7.2	- 7.3	- 7.2	- 5.7
-10	- 4.1	- 4.8	- 6.3	- 7.7	- 8.8	- 9.4	- 9.6	- 9.0	- 7.6
-15	- 6.8	- 8.2	- 9.0	- 10.6	- 12.0	- 12.8	- 12.9	- 12.2	- 10.6
-20	- 10.3	- 12.1	- 13.2	- 14.6	- 16.2	- 17.2	- 16.8	- 16.1	- 14.6
-25	- 13.6	- 16.4	- 18.0	- 19.3	- 21.1	- 21.8	- 21.8	- 21.0	- 18.9
-30	- 18.2	- 20.6	- 22.7	- 24.8	- 26.1	- 27.2	- 27.5	- 26.8	- 24.4
-35	- 21.9	- 24.7	- 27.4	- 29.6	- 31.2	- 32.2	- 32.6	- 32.0	- 30.2
-40	- 27.0	- 28.8	- 31.4	- 34.2	- 36.3	- 37.3	- 38.1	- 37.4	- 34.3
-45	- 30.6	- 31.8	- 34.7	- 37.7	- 39.4	- 40.8	- 41.7	- 42.2	- 42.3
-50	- 32.3	- 34.7	- 37.5	- 40.6	- 43.0	- 45.4	- 46.3	- 47.4	- 46.8
-55	- 36.9	- 40.6	- 42.2	- 43.9	- 45.6	- 47.8	- 50.0	- 50.7	- 49.9
-60	- 42.3	- 43.7	- 45.4	- 47.8	- 49.8	- 51.5	- 53.5	- 55.2	- 55.4
-65	- 46.7	- 48.7	- 50.8	- 52.5	- 54.3	- 56.0	- 57.9	- 59.6	- 61.7
-70	- 52.0	- 53.8	- 55.9	- 57.8	- 59.8	- 62.0	- 65.0	- 67.4	- 70.0
-75	- 58.9	- 61.6	- 64.1	- 66.9	- 69.3	- 72.5	- 76.0	- 79.0	- 83.8
-80	- 68.9	- 72.4	- 76.1	- 80.0	- 84.6	- 88.6	- 93.5	- 99.4	-104.9
-85	- 77.0	- 82.0	- 87.0	- 92.0	- 97.0	-102.0	-107.0	-112.0	-117.0

[a] North latitudes positive, south latitudes negative

Table 47--Continued

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	+ 63.0	+ 63.0	+ 63.0	+ 61.8	+ 59.0	+ 57.3	+ 56.0	+ 54.0	+ 53.0
+80	+ 44.7	+ 40.5	+ 36.4	+ 33.0	+ 28.0	+ 25.0	+ 22.2	+ 19.5	+ 16.8
+75	+ 29.1	+ 27.0	+ 22.3	+ 17.6	+ 13.0	+ 8.0	+ 2.1	- 2.9	- 5.8
+70	+ 21.6	+ 17.9	+ 13.0	+ 8.5	+ 2.8	- 2.7	- 9.3	- 13.2	- 14.6
+65	+ 16.2	+ 12.3	+ 8.1	+ 3.3	- 1.4	- 6.4	- 11.0	- 13.8	- 15.0
+60	+ 10.6	+ 7.2	+ 4.1	+ 0.8	- 3.1	- 6.6	- 10.0	- 13.3	- 14.4
+55	+ 6.8	+ 4.5	+ 2.1	- 0.8	- 3.6	- 7.3	- 9.9	- 11.4	- 12.1
+50	+ 4.5	+ 1.8	- 0.1	- 2.0	- 4.1	- 6.6	- 9.0	- 10.1	- 10.6
+45	+ 2.2	+ 0.4	- 0.8	- 2.5	- 4.3	- 5.8	- 7.3	- 8.4	- 9.1
+40	+ 1.1	0.0	- 1.1	- 2.2	- 3.7	- 4.9	- 5.8	- 6.8	- 7.3
+35	+ 0.2	- 0.6	- 1.3	- 1.9	- 2.8	- 3.8	- 4.6	- 5.2	- 5.7
+30	- 0.6	- 0.8	- 1.2	- 1.7	- 2.1	- 2.6	- 3.1	- 3.6	- 4.2
+25	- 1.2	- 1.2	- 1.2	- 1.2	- 1.3	- 1.3	- 1.7	- 2.1	- 2.4
+20	- 1.7	- 1.4	- 1.0	- 0.6	- 0.3	- 0.3	- 0.4	- 0.6	- 0.9
+15	- 1.9	- 1.4	- 0.8	- 0.2	+ 0.4	+ 0.7	+ 0.8	+ 0.7	+ 0.4
+10	- 2.2	- 1.3	- 0.3	+ 0.4	+ 1.0	+ 1.6	+ 1.7	+ 1.9	+ 1.6
+ 5	- 2.8	- 1.5	- 0.2	+ 0.8	+ 1.5	+ 2.1	+ 2.3	+ 2.5	+ 2.5
0	- 3.3	- 2.0	0.0	+ 1.0	+ 1.8	+ 2.3	+ 2.6	+ 3.0	+ 3.2
- 5	- 4.2	- 2.6	- 0.6	+ 0.9	+ 1.8	+ 2.4	+ 2.8	+ 3.2	+ 3.6
-10	- 5.7	- 3.7	- 1.4	+ 0.6	+ 1.7	+ 2.3	+ 2.9	+ 3.3	+ 3.7
-15	- 8.5	- 5.8	- 2.8	- 0.4	+ 0.9	+ 1.6	+ 2.4	+ 3.1	+ 3.7
-20	- 12.0	- 8.8	- 5.2	- 2.4	- 0.4	+ 0.8	+ 2.1	+ 2.9	+ 3.7
-25	- 16.0	- 12.9	- 9.0	- 5.4	- 2.8	- 0.4	+ 1.4	+ 2.6	+ 3.7
-30	- 21.0	- 17.4	- 13.5	- 9.8	- 5.9	- 3.0	0.0	+ 1.8	+ 3.5
-35	- 27.9	- 24.0	- 19.2	- 15.0	- 10.6	- 5.9	- 3.1	+ 0.5	+ 2.7
-40	- 34.2	- 29.1	- 26.2	- 21.9	- 16.8	- 11.5	- 6.4	- 1.8	+ 1.4
-45	- 40.2	- 35.9	- 33.2	- 29.6	- 24.0	- 17.3	- 12.0	- 5.8	- 0.7
-50	- 45.3	- 43.3	- 41.4	- 38.2	- 32.1	- 24.6	- 18.8	- 9.7	- 3.7
-55	- 49.0	- 48.0	- 47.2	- 46.5	- 44.6	- 37.1	- 27.4	- 18.2	- 10.1
-60	- 55.4	- 55.4	- 55.4	- 55.1	- 53.7	- 47.0	- 37.2	- 26.9	- 16.4
-65	- 63.4	- 65.5	- 66.5	- 67.0	- 64.9	- 60.0	- 54.0	- 45.9	- 38.0
-70	- 74.1	- 78.0	- 81.4	- 84.0	- 83.0	- 80.9	- 78.0	- 75.0	- 72.5
-75	- 88.8	- 94.0	- 98.8	-102.9	-106.7	-110.0	-113.0	-115.0	-119.7
-80	-109.6	-115.0	-120.2	-125.2	-130.2	-134.3	-139.1	-143.8	-150.5
-85	-122.0	-127.0	-132.0	-137.0	-142.0	-147.0	-152.0	-157.0	-162.0

[a] North latitudes positive, south latitudes negative

Table 47--Continued

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geograpnic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	+ 51.0	+ 50.8	+ 50.0	+ 50.8	+ 51.0	+ 52.0	+ 53.0	+ 54.0	+ 56.0
+80	+ 13.6	+ 12.0	+ 11.0	+ 10.9	+ 12.0	+ 12.9	+ 16.0	+ 18.5	+ 22.8
+75	- 6.8	- 7.0	- 7.1	- 7.0	- 4.6	- 1.8	+ 1.2	+ 4.4	+ 8.1
+70	- 13.7	- 11.7	- 10.9	- 9.7	- 7.1	- 4.3	- 1.6	+ 2.2	+ 5.8
+65	- 14.1	- 13.4	- 12.2	- 10.9	- 8.2	- 5.5	- 2.4	+ 0.8	+ 4.0
+60	- 12.3	- 11.9	- 11.0	- 10.2	- 8.5	- 5.4	- 2.0	+ 0.8	+ 3.7
+55	- 12.1	- 11.6	- 10.6	- 8.9	- 7.3	- 4.6	- 2.3	+ 1.0	+ 4.2
+50	- 10.9	- 10.6	- 9.3	- 7.4	- 5.9	- 3.4	- 1.1	+ 2.0	+ 4.4
+45	- 9.9	- 9.5	- 7.8	- 5.9	- 4.1	- 2.0	+ 0.4	+ 2.8	+ 6.0
+40	- 7.6	- 7.4	- 6.5	- 5.2	- 3.2	- 1.1	+ 1.5	+ 3.8	+ 6.4
+35	- 6.0	- 6.0	- 4.9	- 3.5	- 1.4	+ 0.5	+ 2.7	+ 5.0	+ 7.0
+30	- 4.3	- 4.0	- 3.4	- 2.0	0.0	+ 1.7	+ 4.2	+ 6.0	+ 8.0
+25	- 2.6	- 2.4	- 1.8	- 0.5	+ 1.2	+ 3.1	+ 5.1	+ 6.8	+ 8.6
+20	- 1.0	- 0.7	0.0	+ 1.0	+ 2.4	+ 4.0	+ 6.2	+ 7.5	+ 8.8
+15	+ 0.3	+ 0.8	+ 1.2	+ 2.2	+ 3.8	+ 5.1	+ 6.6	+ 8.3	+ 9.2
+10	+ 1.6	+ 1.9	+ 2.4	+ 3.5	+ 4.9	+ 6.2	+ 7.2	+ 8.0	+ 9.2
+ 5	+ 2.5	+ 3.0	+ 3.6	+ 4.5	+ 5.5	+ 6.4	+ 7.8	+ 8.8	+ 9.2
0	+ 3.4	+ 3.9	+ 4.4	+ 5.0	+ 6.0	+ 6.9	+ 8.2	+ 9.2	+ 9.4
- 5	+ 4.0	+ 4.4	+ 4.7	+ 5.4	+ 6.3	+ 7.2	+ 8.3	+ 9.1	+ 9.5
-10	+ 4.1	+ 4.6	+ 5.1	+ 5.8	+ 6.9	+ 7.7	+ 8.5	+ 9.1	+ 9.8
-15	+ 4.3	+ 5.0	+ 5.7	+ 6.4	+ 7.4	+ 8.2	+ 9.0	+ 9.8	+ 10.4
-20	+ 4.5	+ 5.3	+ 6.2	+ 7.2	+ 8.2	+ 9.0	+ 9.9	+ 11.0	+ 11.5
-25	+ 4.7	+ 5.9	+ 6.9	+ 8.2	+ 9.2	+ 10.2	+ 11.1	+ 12.1	+ 12.5
-30	+ 4.8	+ 6.3	+ 7.6	+ 9.1	+ 10.2	+ 12.0	+ 12.9	+ 13.5	+ 14.1
-35	+ 4.7	+ 6.9	+ 8.4	+ 10.1	+ 11.3	+ 12.9	+ 14.2	+ 15.0	+ 15.7
-40	+ 4.1	+ 7.0	+ 9.4	+ 11.0	+ 12.8	+ 14.4	+ 15.8	+ 17.0	+ 17.9
-45	+ 2.5	+ 6.3	+ 9.3	+ 11.6	+ 14.2	+ 16.2	+ 17.6	+ 19.1	+ 20.0
-50	+ 0.5	+ 4.9	+ 9.6	+ 13.5	+ 16.3	+ 18.6	+ 20.9	+ 23.7	+ 21.7
-55	- 4.3	+ 3.3	+ 9.6	+ 16.1	+ 19.6	+ 23.4	+ 27.6	+ 28.6	+ 27.2
-60	- 5.3	+ 2.8	+ 12.9	+ 21.9	+ 27.1	+ 31.5	+ 33.2	+ 37.7	+ 37.5
-65	- 28.0	- 8.0	+ 12.0	+ 29.5	+ 47.5	+ 58.0	+ 61.0	+ 61.6	+ 58.0
-70	- 71.0	- 80.0	-131.0	+150.0	+127.4	+114.2	+ 93.3	+ 79.0	+ 75.9
-75	-127.0	-138.0	-158.0	+176.0	+160.0	+145.0	+130.0	+119.0	+106.0
-80	-156.8	-165.0	-174.0	+178.2	+169.5	+162.5	+154.0	+145.5	+137.5
-85	-167.0	-172.0	-177.0	+178.0	+173.0	+166.0	+159.4	+154.0	+150.0

[a] North latitudes positive, south latitudes negative

Table 47--Continued

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	+ 57.0	+ 59.0	+ 61.0	+ 63.5	+ 67.0	+ 71.0	+ 76.5	+ 83.5	+ 92.0
+80	+ 26.5	+ 29.5	+ 33.5	+ 37.2	+ 41.8	+ 45.6	+ 50.0	+ 54.2	+ 58.4
+75	+ 12.9	+ 17.0	+ 20.9	+ 24.7	+ 28.5	+ 33.0	+ 38.0	+ 42.5	+ 46.9
+70	+ 9.0	+ 13.0	+ 16.8	+ 19.8	+ 23.4	+ 26.9	+ 30.6	+ 35.1	+ 39.4
+65	+ 7.3	+ 10.9	+ 14.8	+ 18.0	+ 21.9	+ 24.7	+ 28.5	+ 31.5	+ 34.6
+60	+ 6.4	+ 9.5	+ 14.1	+ 16.8	+ 20.3	+ 22.4	+ 25.3	+ 27.8	+ 28.7
+55	+ 7.9	+ 11.5	+ 13.8	+ 16.5	+ 18.8	+ 21.5	+ 22.7	+ 23.4	+ 25.9
+50	+ 7.4	+ 10.6	+ 13.1	+ 15.4	+ 16.9	+ 18.2	+ 20.0	+ 23.1	+ 24.1
+45	+ 8.7	+ 10.2	+ 12.8	+ 15.1	+ 17.1	+ 17.7	+ 19.1	+ 20.7	+ 20.8
+40	+ 9.1	+ 11.3	+ 12.6	+ 14.4	+ 15.8	+ 17.1	+ 17.8	+ 18.8	+ 19.3
+35	+ 9.3	+ 10.8	+ 11.9	+ 13.4	+ 14.5	+ 15.3	+ 16.0	+ 16.6	+ 17.2
+30	+ 9.6	+ 10.8	+ 11.7	+ 12.7	+ 13.2	+ 13.7	+ 14.3	+ 14.8	+ 14.7
+25	+ 10.0	+ 10.6	+ 11.3	+ 11.9	+ 12.0	+ 12.3	+ 12.8	+ 12.9	+ 13.3
+20	+ 9.8	+ 10.4	+ 11.0	+ 10.8	+ 10.9	+ 11.2	+ 11.6	+ 11.5	+ 11.7
+15	+ 9.7	+ 10.2	+ 10.6	+ 10.3	+ 10.2	+ 10.2	+ 10.3	+ 10.1	+ 10.5
+10	+ 9.6	+ 9.9	+ 9.9	+ 9.8	+ 9.4	+ 9.0	+ 8.9	+ 9.1	+ 9.6
+ 5	+ 9.5	+ 9.4	+ 9.2	+ 9.0	+ 8.9	+ 8.9	+ 8.9	+ 9.2	+ 9.5
0	+ 9.6	+ 9.5	+ 9.0	+ 9.1	+ 8.8	+ 9.2	+ 9.2	+ 9.5	+ 9.4
- 5	+ 9.9	+ 9.9	+ 9.7	+ 9.7	+ 9.3	+ 9.7	+ 9.7	+ 9.7	+ 9.7
-10	+ 10.2	+ 10.6	+ 10.2	+ 10.3	+ 10.2	+ 10.3	+ 10.4	+ 10.4	+ 10.4
-15	+ 11.2	+ 11.4	+ 11.2	+ 11.2	+ 11.0	+ 11.3	+ 11.3	+ 11.4	+ 11.4
-20	+ 12.0	+ 12.3	+ 12.4	+ 12.4	+ 12.3	+ 12.6	+ 12.6	+ 12.7	+ 12.6
-25	+ 13.0	+ 13.4	+ 13.7	+ 13.6	+ 14.0	+ 14.0	+ 14.0	+ 14.2	+ 13.9
-30	+ 14.2	+ 14.9	+ 15.3	+ 15.2	+ 15.5	+ 15.7	+ 15.8	+ 15.7	+ 15.7
-35	+ 16.1	+ 16.7	+ 17.1	+ 17.3	+ 17.6	+ 17.6	+ 17.7	+ 17.3	+ 17.0
-40	+ 18.2	+ 19.0	+ 19.3	+ 19.5	+ 19.6	+ 19.6	+ 19.7	+ 19.5	+ 19.2
-45	+ 20.6	+ 21.3	+ 21.6	+ 21.8	+ 21.9	+ 21.9	+ 21.7	+ 21.7	+ 21.8
-50	+ 23.8	+ 25.2	+ 25.7	+ 25.0	+ 25.6	+ 25.7	+ 25.5	+ 25.2	+ 25.2
-55	+ 28.7	+ 28.6	+ 29.1	+ 28.0	+ 28.9	+ 29.7	+ 28.7	+ 29.4	+ 30.0
-60	+ 37.1	+ 37.0	+ 36.8	+ 36.4	+ 35.5	+ 34.3	+ 34.7	+ 35.1	+ 35.0
-65	+ 52.0	+ 48.8	+ 46.9	+ 45.2	+ 44.0	+ 42.7	+ 42.0	+ 41.2	+ 40.8
-70	+ 70.5	+ 66.1	+ 63.0	+ 60.5	+ 58.4	+ 56.8	+ 55.7	+ 55.1	+ 54.4
-75	+ 95.0	+ 87.2	+ 83.0	+ 80.0	+ 78.0	+ 76.0	+ 74.0	+ 72.1	+ 70.8
-80	+130.0	+125.0	+118.9	+113.8	+107.2	+102.8	+ 97.0	+ 91.0	+ 88.1
-85	+145.0	+140.0	+136.0	+131.0	+126.7	+122.0	+117.0	+112.0	+107.0

[a] North latitudes positive, south latitudes negative

Table 47--Continued

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	+105.0	+118.0	+136.0	+152.0	+170.0	-172.5	-160.0	-149.0	-135.0
+80	+ 64.5	+ 72.1	+ 85.0	+ 99.5	+114.5	+142.5	+174.0	-149.5	-134.0
+75	+ 51.0	+ 56.2	+ 62.0	+ 69.5	+ 76.0	+ 83.5	+ 98.5	- 30.0	-133.0
+70	+ 43.1	+ 46.6	+ 50.0	+ 51.8	+ 51.0	+ 48.5	+ 34.5	+ 10.0	- 19.0
+65	+ 35.8	+ 37.7	+ 40.0	+ 42.2	+ 41.4	+ 37.3	+ 26.5	+ 13.1	- 2.0
+60	+ 29.9	+ 32.8	+ 33.4	+ 33.2	+ 31.4	+ 26.8	+ 21.4	+ 13.5	+ 4.0
+55	+ 27.8	+ 28.7	+ 28.7	+ 28.0	+ 27.0	+ 24.0	+ 19.7	+ 13.3	+ 5.0
+50	+ 24.6	+ 25.2	+ 25.4	+ 24.4	+ 23.0	+ 20.2	+ 16.7	+ 12.2	+ 6.8
+45	+ 22.2	+ 22.4	+ 23.1	+ 21.0	+ 20.0	+ 17.1	+ 15.2	+ 11.6	+ 8.8
+40	+ 19.1	+ 19.5	+ 19.3	+ 18.4	+ 17.6	+ 16.1	+ 14.4	+ 11.8	+ 8.4
+35	+ 17.4	+ 17.3	+ 17.0	+ 16.3	+ 15.6	+ 14.3	+ 13.2	+ 11.2	+ 8.6
+30	+ 15.2	+ 14.7	+ 14.7	+ 14.5	+ 12.8	+ 13.0	+ 12.2	+ 10.4	+ 8.5
+25	+ 13.3	+ 13.3	+ 13.2	+ 13.0	+ 11.9	+ 12.0	+ 11.2	+ 10.1	+ 9.0
+20	+ 11.9	+ 11.8	+ 11.7	+ 11.7	+ 11.2	+ 10.8	+ 10.2	+ 9.6	+ 8.9
+15	+ 10.7	+ 10.7	+ 10.7	+ 10.7	+ 10.4	+ 10.4	+ 9.6	+ 9.5	+ 9.2
+10	+ 10.0	+ 10.0	+ 9.9	+ 9.8	+ 9.8	+ 10.0	+ 9.9	+ 9.8	+ 9.2
+ 5	+ 9.5	+ 9.3	+ 9.2	+ 9.4	+ 9.6	+ 9.8	+ 10.2	+ 10.2	+ 9.7
0	+ 9.0	+ 8.5	+ 8.9	+ 9.3	+ 9.7	+ 10.1	+ 10.5	+ 10.5	+ 10.1
- 5	+ 9.3	+ 9.4	+ 9.6	+ 9.8	+ 10.0	+ 10.4	+ 10.7	+ 10.8	+ 10.6
-10	+ 10.3	+ 10.4	+ 10.5	+ 10.5	+ 10.6	+ 10.8	+ 11.2	+ 11.3	+ 11.3
-15	+ 11.3	+ 11.4	+ 11.4	+ 11.3	+ 11.5	+ 11.6	+ 11.9	+ 12.1	+ 12.1
-20	+ 12.7	+ 12.9	+ 12.6	+ 12.4	+ 12.2	+ 13.0	+ 13.2	+ 13.3	+ 13.4
-25	+ 14.1	+ 14.2	+ 13.9	+ 13.8	+ 14.1	+ 14.3	+ 14.6	+ 14.8	+ 14.9
-30	+ 15.6	+ 15.8	+ 15.5	+ 15.7	+ 15.9	+ 16.3	+ 16.8	+ 16.7	+ 16.8
-35	+ 17.3	+ 17.3	+ 17.4	+ 17.6	+ 17.7	+ 18.2	+ 19.1	+ 18.9	+ 18.9
-40	+ 19.2	+ 19.3	+ 19.2	+ 19.7	+ 19.8	+ 20.1	+ 21.0	+ 21.3	+ 21.3
-45	+ 21.7	+ 21.8	+ 21.7	+ 22.3	+ 22.4	+ 23.2	+ 23.6	+ 23.8	+ 23.3
-50	+ 25.2	+ 25.2	+ 25.4	+ 25.4	+ 25.3	+ 25.6	+ 26.2	+ 26.4	+ 25.6
-55	+ 30.0	+ 29.8	+ 29.9	+ 29.7	+ 29.8	+ 30.1	+ 29.2	+ 29.1	+ 28.6
-60	+ 34.5	+ 34.4	+ 35.3	+ 35.0	+ 34.8	+ 34.2	+ 33.8	+ 32.7	+ 31.3
-65	+ 40.7	+ 40.1	+ 39.8	+ 39.7	+ 39.4	+ 39.2	+ 38.5	+ 37.4	+ 35.5
-70	+ 54.0	+ 52.8	+ 52.0	+ 51.2	+ 50.6	+ 49.5	+ 48.9	+ 46.4	+ 43.8
-75	+ 69.5	+ 68.3	+ 66.5	+ 65.2	+ 63.3	+ 61.4	+ 59.4	+ 56.0	+ 52.0
-80	+ 85.0	+ 82.0	+ 79.2	+ 76.2	+ 73.1	+ 70.0	+ 66.0	+ 62.6	+ 58.0
-85	+102.0	+ 97.0	+ 92.0	+ 87.0	+ 82.0	+ 77.0	+ 72.0	+ 67.0	+ 62.0

[a] North latitudes positive, south latitudes negative

Table 47--Continued

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	-124.0	-117.0	-108.0	-100.0	-92.0	-85.0	-79.5	-75.0	-68.0
+80	-117.0	-106.8	-99.2	-94.9	-90.5	-82.0	-75.6	-70.0	-65.0
+75	-116.0	-101.0	-93.0	-84.5	-77.0	-72.5	-67.4	-63.1	-59.2
+70	-52.9	-63.8	-65.9	-65.5	-63.0	-59.0	-57.6	-55.1	-51.9
+65	-20.0	-37.0	-47.5	-52.0	-52.5	-51.8	-50.0	-47.9	-46.3
+60	-13.5	-24.6	-33.8	-38.9	-42.4	-39.2	-41.7	-41.4	-39.8
+55	-3.7	-13.6	-20.4	-26.2	-31.0	-34.1	-36.0	-36.6	-35.0
+50	+0.3	-7.7	-14.0	-20.4	-24.7	-27.8	-29.6	-30.3	-30.2
+45	+2.9	-2.0	-9.2	-14.3	-19.0	-22.9	-25.0	-26.9	-26.8
+40	+4.0	+0.7	-5.7	-10.0	-14.6	-18.6	-21.1	-23.2	-23.9
+35	+5.5	+1.3	-2.2	-7.1	-11.3	-15.0	-18.2	-20.4	-21.6
+30	+6.6	+3.2	+0.1	-3.8	-8.4	-12.3	-15.7	-18.4	-20.1
+25	+7.3	+4.9	+2.0	-2.0	-5.9	-10.0	-13.7	-16.2	-18.3
+20	+7.3	+5.4	+2.7	-0.3	-3.7	-8.2	-11.5	-14.3	-16.6
+15	+8.2	+6.2	+4.2	+1.2	-2.0	-6.3	-9.9	-12.8	-15.4
+10	+8.4	+7.0	+5.1	+2.1	-1.0	-4.8	-8.5	-11.6	-14.3
+5	+8.9	+7.6	+5.4	+3.2	-0.1	-3.6	-7.2	-10.6	-13.3
0	+9.4	+8.1	+6.4	+3.9	+0.9	-2.2	-6.1	-9.7	-12.9
-5	+10.3	+8.9	+7.2	+4.7	+1.7	-1.5	-5.2	-9.1	-12.2
-10	+11.0	+9.7	+8.1	+5.8	+2.6	-0.5	-4.1	-8.3	-11.7
-15	+11.7	+10.7	+9.2	+7.0	+4.2	+0.4	-3.0	-7.2	-10.9
-20	+13.1	+12.0	+10.5	+8.5	+5.8	+1.8	-2.0	-5.8	-10.1
-25	+14.7	+14.0	+12.3	+9.9	+7.3	+3.4	-0.5	-4.8	-9.2
-30	+16.2	+16.2	+14.4	+11.5	+8.6	+5.2	+1.0	-3.5	-7.7
-35	+18.6	+17.9	+16.2	+13.5	+9.8	+7.2	+2.9	-1.2	-5.6
-40	+20.8	+19.8	+17.7	+16.1	+12.4	+9.2	+4.8	+0.5	-3.5
-45	+22.7	+21.8	+19.7	+17.3	+14.1	+10.8	+6.4	+1.9	-2.0
-50	+24.5	+23.2	+20.8	+18.7	+15.8	+12.4	+8.4	+4.7	+0.7
-55	+27.3	+25.1	+22.8	+19.9	+17.0	+13.8	+10.1	+6.8	+3.0
-60	+29.4	+27.3	+24.7	+22.0	+19.0	+15.8	+12.5	+9.0	+5.4
-65	+33.2	+30.8	+27.5	+24.6	+21.5	+18.6	+16.4	+11.7	+7.9
-70	+40.1	+36.6	+32.9	+30.6	+26.8	+23.7	+20.6	+15.4	+11.3
-75	+47.4	+42.8	+38.4	+34.4	+30.0	+26.8	+23.2	+19.4	+15.0
-80	+53.0	+48.0	+43.8	+38.3	+34.4	+29.1	+25.4	+21.0	+17.2
-85	+57.0	+52.0	+47.0	+42.0	+38.0	+33.0	+28.0	+23.0	+18.0

[a] North latitudes positive, south latitudes negative

Table 47--Concluded

Values of magnetic declination (D) for 1945 expressed in degrees, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	- 63.0	- 57.5	- 52.0	- 47.0	- 39.0	- 35.0	- 30.7	- 28.0	- 26.0
+80	- 60.0	- 54.5	- 49.0	- 44.2	- 39.2	- 34.0	- 27.4	- 19.2	- 16.1
+75	- 54.6	- 49.8	- 46.1	- 42.4	- 37.8	- 32.1	- 23.0	- 14.0	- 12.0
+70	- 48.8	- 45.5	- 42.9	- 39.2	- 34.0	- 29.4	- 25.2	- 20.8	- 17.0
+65	- 42.5	- 40.2	- 37.7	- 34.2	- 30.6	- 26.9	- 23.0	- 19.3	- 15.7
+60	- 38.2	- 35.7	- 32.7	- 30.3	- 27.5	- 24.1	- 20.5	- 17.4	- 14.7
+55	- 32.8	- 30.9	- 29.1	- 27.2	- 24.3	- 21.3	- 18.6	- 15.8	- 13.3
+50	- 29.4	- 28.4	- 26.9	- 24.4	- 21.4	- 19.2	- 16.6	- 14.2	- 11.8
+45	- 26.5	- 25.7	- 24.3	- 22.2	- 20.4	- 17.3	- 16.1	- 12.0	- 10.3
+40	- 24.1	- 23.8	- 22.5	- 20.0	- 18.7	- 16.7	- 14.8	- 12.5	- 10.4
+35	- 22.6	- 22.3	- 21.9	- 19.7	- 18.3	- 16.3	- 13.9	- 12.4	- 10.3
+30	- 21.1	- 21.2	- 20.2	- 19.5	- 18.3	- 16.2	- 14.5	- 12.2	- 9.7
+25	- 19.7	- 20.4	- 20.3	- 20.2	- 18.5	- 16.3	- 14.6	- 12.2	- 10.0
+20	- 18.5	- 20.0	- 20.1	- 20.2	- 18.9	- 17.2	- 14.9	- 12.8	- 10.5
+15	- 17.4	- 19.3	- 20.1	- 20.0	- 19.6	- 18.1	- 16.2	- 14.0	- 11.6
+10	- 16.9	- 18.8	- 20.1	- 20.9	- 20.5	- 19.2	- 17.4	- 15.4	- 13.0
+ 5	- 16.0	- 18.4	- 20.1	- 21.2	- 21.3	- 20.8	- 19.0	- 17.0	- 14.7
0	- 15.6	- 18.0	- 20.0	- 21.4	- 21.9	- 21.6	- 20.7	- 18.8	- 16.8
- 5	- 15.3	- 17.8	- 20.0	- 21.4	- 22.4	- 22.5	- 22.0	- 20.6	- 19.0
-10	- 15.2	- 17.7	- 19.9	- 21.6	- 22.8	- 23.3	- 23.6	- 22.7	- 21.2
-15	- 14.6	- 17.3	- 19.9	- 21.9	- 24.1	- 24.3	- 25.1	- 24.3	- 23.5
-20	- 13.8	- 16.9	- 19.3	- 21.7	- 23.8	- 24.7	- 25.7	- 26.0	- 25.0
-25	- 12.6	- 16.1	- 18.9	- 21.2	- 23.6	- 25.0	- 26.3	- 26.8	- 26.6
-30	- 11.1	- 14.6	- 17.9	- 20.6	- 22.8	- 24.5	- 26.4	- 27.4	- 27.9
-35	- 9.7	- 13.0	- 16.1	- 19.6	- 21.7	- 23.5	- 25.0	- 26.5	- 27.6
-40	- 7.5	- 11.3	- 14.2	- 17.5	- 20.1	- 22.3	- 24.5	- 26.9	- 27.8
-45	- 5.7	- 9.4	- 12.4	- 15.6	- 18.0	- 20.6	- 23.2	- 24.6	- 25.8
-50	- 2.9	- 6.5	- 9.6	- 12.8	- 15.4	- 18.2	- 20.6	- 22.8	- 24.7
-55	- 0.4	- 3.8	- 7.2	- 10.4	- 13.6	- 16.4	- 18.2	- 20.3	- 21.1
-60	+ 2.0	- 1.0	- 4.0	- 6.8	- 10.3	- 13.6	- 16.2	- 19.2	- 21.1
-65	+ 4.4	+ 1.6	- 1.7	- 4.6	- 7.8	- 11.3	- 15.3	- 19.0	- 21.9
-70	+ 7.4	+ 4.2	+ 0.8	- 2.8	- 6.2	- 9.5	- 14.4	- 19.6	- 23.0
-75	+ 10.9	+ 7.2	+ 3.0	- 1.0	- 5.0	- 9.0	- 14.2	- 19.5	- 24.8
-80	+ 12.1	+ 8.8	+ 4.5	- 1.0	- 5.8	- 9.7	- 15.0	- 20.5	- 25.0
-85	+ 13.0	+ 8.0	+ 3.0	- 2.0	- 7.0	- 12.0	- 17.0	- 22.0	- 27.0

[a] North latitudes positive, south latitudes negative

Table 48

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	51	50	50	50	50	49	49	48	47
+80	71	72	72	71	70	69	68	67	66
+75	92	93	93	93	91	89	88	87	86
+70	110	111	111	111	110	109	107	106	105
+65	127	128	127	126	126	127	127	128	127
+60	144	148	152	149	148	149	151	148	148
+55	167	169	172	172	172	173	175	175	175
+50	192	194	196	197	198	199	197	201	201
+45	215	219	221	222	222	222	227	225	227
+40	241	244	247	248	249	251	253	253	254
+35	267	269	271	273	276	278	280	283	280
+30	291	294	296	296	297	300	304	306	308
+25	309	314	313	312	314	318	326	329	331
+20	320	325	327	328	332	334	340	344	347
+15	326	332	333	335	339	344	346	349	355
+10	318	322	326	330	334	339	343	347	351
+ 5	304	308	313	315	318	327	332	334	338
0	285	288	289	291	296	301	310	313	318
- 5	261	262	263	266	268	273	277	282	288
-10	240	238	238	237	238	242	246	248	256
-15	215	212	209	210	209	212	214	216	219
-20	196	192	190	187	183	181	183	186	188
-25	178	174	170	167	163	158	157	160	166
-30	168	163	156	152	147	145	140	140	148
-35	162	155	148	144	139	135	134	137	139
-40	159	153	147	141	137	136	135	136	138
-45	162	157	150	144	139	139	139	141	144
-50	170	163	156	152	148	148	148	149	152
-55	176	169	162	159	154	152	152	156	158
-60	177	170	166	162	159	158	160	165	171
-65	178	172	169	168	169	170	175	180	186
-70	182	179	179	180	183	188	192	199	202
-75	191	191	192	196	199	202	205	208	206
-80	190	192	192	193	194	194	194	193	191
-85	172	173	173	173	172	172	172	171	170

[a] North latitudes positive, south latitudes negative

Table 48--Continued

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	46	45	44	43	42	40	38	36	34
+80	65	63	61	58	55	53	50	46	41
+75	85	83	80	76	73	70	67	63	56
+70	103	100	97	95	92	89	84	79	76
+65	124	123	122	120	117	114	110	107	104
+60	147	148	146	146	143	142	140	137	132
+55	174	172	172	173	172	172	171	171	167
+50	201	202	201	199	201	202	202	203	207
+45	227	228	228	229	230	230	231	239	242
+40	252	256	258	261	263	266	270	275	282
+35	284	286	287	289	293	297	302	309	313
+30	311	313	315	319	322	329	334	338	345
+25	333	336	338	343	348	353	359	366	373
+20	351	354	358	362	367	373	380	386	391
+15	360	364	367	372	377	383	390	396	401
+10	356	361	365	372	378	383	388	396	402
+ 5	342	347	354	362	368	375	381	390	395
0	325	327	332	343	350	358	363	371	380
- 5	297	300	306	316	325	333	339	345	353
-10	263	268	274	284	295	304	312	318	326
-15	227	237	244	254	263	272	281	288	297
-20	194	203	217	226	233	241	248	257	265
-25	171	178	186	197	206	213	222	229	234
-30	156	164	173	180	188	196	203	206	210
-35	147	155	163	172	179	185	189	191	191
-40	144	151	158	167	173	178	180	180	180
-45	148	155	161	168	172	175	175	175	173
-50	156	160	167	172	175	177	175	172	170
-55	164	170	178	180	180	179	178	173	164
-60	178	183	185	186	186	182	178	171	158
-65	190	192	193	196	192	186	179	172	162
-70	203	203	202	195	188	183	177	171	158
-75	205	201	195	189	183	178	172	165	153
-80	188	185	182	177	175	172	167	162	152
-85	169	168	168	167	164	163	162	161	159

[a] North latitudes positive, south latitudes negative

Table 48--Continued

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	33	31	29	28	28	28	27	26	25
+80	38	35	33	31	30	29	30	31	32
+75	52	49	47	50	49	48	53	50	56
+70	74	72	71	70	70	71	74	78	83
+65	100	98	97	98	98	100	103	110	118
+60	132	130	130	131	132	140	147	147	162
+55	170	168	168	165	167	172	181	187	193
+50	205	208	209	212	215	218	219	222	227
+45	244	245	247	250	253	255	257	259	253
+40	286	287	288	288	289	290	290	289	287
+35	318	320	323	324	323	321	316	313	312
+30	350	353	354	354	351	347	342	338	332
+25	377	379	379	378	374	368	362	356	348
+20	394	397	397	394	391	384	377	370	362
+15	404	406	405	404	400	394	387	380	373
+10	406	410	411	407	403	398	393	387	381
+ 5	400	402	403	402	400	397	393	388	383
0	386	388	389	390	391	391	388	386	382
- 5	361	368	371	374	377	377	375	375	376
-10	335	342	345	351	357	359	359	362	364
-15	305	312	318	325	331	336	340	346	350
-20	272	280	288	297	304	312	318	323	326
-25	242	250	256	264	273	280	289	295	298
-30	215	220	225	231	240	251	255	261	266
-35	194	195	198	200	207	213	220	226	231
-40	179	178	175	174	176	180	186	190	196
-45	168	161	158	153	153	152	152	155	160
-50	162	156	149	140	131	127	125	124	127
-55	156	146	138	132	122	109	101	98	98
-60	150	143	135	124	113	94	77	67	62
-65	152	141	128	115	99	72	51	39	32
-70	142	129	116	100	82	57	45	37	29
-75	140	128	116	106	94	79	66	55	47
-80	143	137	131	127	123	119	115	111	106
-85	157	154	152	150	147	144	142	141	140

[a] North latitudes positive, south latitudes negative

Table 48--Continued

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	24	24	24	23	22	22	21	20	19
+80	34	36	37	37	38	38	38	38	38
+75	56	65	65	68	66	72	72	73	73
+70	88	93	99	103	105	108	110	112	112
+65	124	131	139	143	144	148	149	151	152
+60	162	169	173	175	178	183	183	185	188
+55	196	198	203	206	210	212	210	208	207
+50	230	233	236	235	233	232	232	231	229
+45	257	262	260	260	256	252	248	246	242
+40	286	283	280	277	273	268	264	258	254
+35	308	303	300	291	286	281	276	271	266
+30	325	319	312	307	300	293	287	282	277
+25	342	333	328	322	312	304	298	292	288
+20	353	345	338	331	322	315	310	304	300
+15	365	356	347	339	335	329	323	316	312
+10	372	365	358	350	345	341	335	333	328
+ 5	376	370	364	360	354	352	347	344	342
0	377	373	368	365	362	360	357	354	352
- 5	374	372	368	365	364	364	363	361	361
-10	366	364	362	361	360	359	359	358	357
-15	352	352	351	348	349	349	350	350	348
-20	330	334	332	332	332	333	333	333	332
-25	302	303	306	308	309	310	310	313	316
-30	270	274	277	279	282	285	287	289	291
-35	237	241	246	249	253	258	263	265	267
-40	202	208	213	217	222	227	233	238	243
-45	166	172	176	180	187	194	202	208	212
-50	132	137	140	146	154	162	169	177	185
-55	98	102	107	115	123	130	139	146	153
-60	61	62	66	72	81	91	102	114	122
-65	27	24	25	30	40	54	66	82	89
-70	21	15	10	10	19	28	41	53	67
-75	42	39	38	38	37	38	40	47	60
-80	102	97	95	94	93	92	92	92	92
-85	138	137	137	136	136	136	135	135	136

[a] North latitudes positive, south latitudes negative

Table 48--Continued

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	19	18	18	17	17	17	16	15	15
+80	37	36	35	34	32	29	27	24	22
+75	72	70	68	66	63	58	53	48	43
+70	113	112	110	108	105	100	95	90	80
+65	151	147	145	141	137	133	127	122	116
+60	185	181	177	172	167	163	158	152	143
+55	205	203	202	196	194	191	187	180	172
+50	227	224	220	218	212	207	203	203	202
+45	240	240	236	233	232	230	227	224	223
+40	250	248	246	245	243	242	243	242	241
+35	260	257	256	255	254	254	255	256	256
+30	273	270	268	266	266	266	267	269	272
+25	284	281	279	278	277	277	279	283	286
+20	296	293	291	290	288	288	293	296	299
+15	309	306	305	305	304	303	306	307	311
+10	325	323	322	321	318	317	319	321	322
+ 5	340	338	336	334	332	330	330	330	330
0	351	348	346	343	340	339	336	336	335
- 5	361	359	355	352	347	342	338	335	332
-10	356	355	352	348	344	340	336	332	328
-15	347	346	342	341	337	334	330	327	322
-20	334	333	330	327	324	323	320	319	316
-25	317	315	313	312	310	309	308	308	307
-30	293	294	295	294	294	294	295	295	295
-35	270	272	274	276	277	278	278	280	281
-40	246	250	252	254	256	260	263	266	268
-45	218	222	228	233	237	242	247	251	254
-50	193	200	206	211	217	221	227	233	238
-55	164	172	179	185	190	197	200	208	216
-60	130	140	148	158	163	169	176	183	190
-65	96	102	110	119	130	139	148	156	164
-70	76	83	89	96	105	113	122	133	141
-75	68	75	82	88	96	103	109	117	125
-80	95	98	102	107	108	111	119	125	129
-85	136	137	137	138	138	139	140	142	143

[a] North latitudes positive, south latitudes negative

Table 48--Continued

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	15	16	16	17	17	18	20	21	23
+80	18	16	13	10	8	8	9	12	15
+75	38	32	27	22	16	10	5	4	10
+70	72	61	52	43	34	25	17	13	13
+65	106	98	87	74	62	53	41	33	30
+60	133	128	120	108	96	83	73	64	58
+55	167	158	147	138	128	117	105	98	86
+50	196	188	181	171	163	152	142	132	122
+45	215	210	204	203	193	188	177	168	157
+40	238	238	233	232	224	218	210	203	193
+35	258	258	256	253	249	242	243	234	227
+30	274	277	277	276	268	274	270	263	254
+25	288	289	292	294	293	296	296	287	280
+20	302	304	307	308	309	312	312	307	302
+15	313	315	318	321	322	323	323	321	317
+10	323	325	327	328	328	331	330	328	325
+ 5	330	332	333	333	333	334	334	333	328
0	334	332	329	328	329	333	333	332	327
- 5	330	327	326	323	323	326	326	323	321
-10	326	323	321	317	316	316	313	313	312
-15	321	318	313	310	308	306	303	303	302
-20	312	308	307	304	302	297	294	293	290
-25	303	300	298	296	294	288	287	284	280
-30	293	292	289	286	285	282	279	277	271
-35	281	281	279	277	277	274	273	269	266
-40	268	269	269	269	269	268	266	264	261
-45	257	258	259	259	259	261	261	260	258
-50	241	243	246	247	248	250	252	255	257
-55	221	225	229	233	237	241	244	248	252
-60	196	201	208	216	222	228	232	237	241
-65	172	179	186	194	203	211	218	223	228
-70	151	158	166	177	187	194	201	207	211
-75	131	138	147	156	164	172	182	188	190
-80	136	142	149	155	160	163	168	171	172
-85	145	147	149	150	152	153	155	156	157

[a] North latitudes positive, south latitudes negative

Table 48--Continued

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	24	26	27	29	31	33	34	36	38
+80	18	22	26	30	35	40	45	49	53
+75	17	27	34	39	48	53	57	60	64
+70	18	26	35	44	53	62	77	83	78
+65	33	40	48	54	63	74	80	90	97
+60	57	58	64	72	79	93	98	107	116
+55	84	82	86	95	109	126	119	128	137
+50	116	115	116	118	125	140	140	147	156
+45	157	152	147	148	150	156	163	170	173
+40	187	182	177	174	177	179	183	188	197
+35	218	214	205	203	200	203	205	210	213
+30	248	242	233	229	227	224	224	227	230
+25	272	266	258	253	249	247	247	246	248
+20	297	291	281	273	270	265	261	262	264
+15	311	305	298	292	286	282	276	276	277
+10	321	315	309	303	298	293	287	286	285
+ 5	325	322	315	309	304	298	295	293	292
0	319	322	316	311	305	301	297	293	292
- 5	320	316	311	305	299	294	290	286	284
-10	312	308	302	297	291	285	281	276	274
-15	298	294	290	286	279	273	268	264	259
-20	285	282	279	273	268	262	256	250	247
-25	276	272	268	262	256	250	245	239	234
-30	268	265	260	254	248	242	236	228	223
-35	262	259	253	248	242	237	230	222	217
-40	257	255	251	247	242	237	230	223	217
-45	257	255	253	250	244	239	232	227	222
-50	257	256	253	252	248	243	238	233	227
-55	254	254	253	252	251	247	243	238	233
-60	243	245	246	247	246	246	244	241	237
-65	230	231	232	234	236	236	236	236	235
-70	209	207	207	209	210	214	221	223	224
-75	189	187	186	186	187	189	192	196	199
-80	172	172	171	171	172	173	174	177	178
-85	158	159	160	162	163	164	165	166	167

[a] North latitudes positive, south latitudes negative

Table 48--Concluded

Values of horizontal intensity (H) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	39	41	43	44	46	47	49	50	50
+80	55	57	59	62	64	66	68	70	71
+75	68	72	75	78	80	83	86	88	90
+70	83	88	94	99	103	104	106	107	108
+65	101	106	112	115	117	118	119	123	126
+60	122	127	131	133	138	142	144	145	145
+55	146	152	155	157	158	159	164	167	167
+50	163	170	175	178	180	182	185	187	189
+45	181	189	195	200	202	206	208	209	212
+40	203	210	215	222	223	230	232	235	238
+35	221	225	232	238	243	248	251	257	265
+30	237	242	250	258	262	270	278	282	288
+25	252	259	264	271	277	285	293	300	304
+20	267	271	277	286	292	299	304	308	316
+15	279	283	289	295	300	308	313	316	322
+10	290	292	296	301	305	308	312	312	316
+ 5	293	294	296	297	301	302	303	303	303
0	291	289	289	290	291	290	290	288	287
- 5	282	281	278	278	276	274	269	262	262
-10	272	266	266	262	260	258	248	242	243
-15	255	252	250	245	240	236	227	222	218
-20	243	240	232	226	222	218	211	204	200
-25	229	225	217	212	207	204	198	190	184
-30	217	213	206	199	195	192	187	181	175
-35	212	207	200	195	189	185	180	175	169
-40	209	204	198	194	188	182	177	172	166
-45	215	209	204	199	192	187	182	176	169
-50	222	216	210	204	198	191	186	181	175
-55	227	221	214	207	202	197	192	187	182
-60	231	225	219	212	206	202	195	189	183
-65	232	228	224	217	209	203	197	191	183
-70	224	223	221	216	210	203	198	192	187
-75	202	204	205	205	203	202	198	195	192
-80	179	181	183	185	186	187	188	189	190
-85	168	168	169	170	170	171	172	172	172

[a] North latitudes positive, south latitudes negative

Table 49

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	+535	+537	+539	+541	+542	+544	+546	+547	+548
+80	+519	+527	+532	+532	+532	+534	+536	+538	+541
+75	+517	+518	+519	+520	+521	+524	+526	+528	+531
+70	+501	+501	+503	+505	+506	+508	+511	+515	+517
+65	+487	+486	+487	+489	+492	+493	+497	+503	+509
+60	+469	+469	+481	+472	+473	+477	+481	+487	+491
+55	+451	+451	+451	+451	+453	+460	+469	+469	+473
+50	+427	+427	+426	+427	+431	+437	+437	+442	+447
+45	+401	+399	+398	+398	+401	+405	+412	+412	+419
+40	+361	+360	+360	+361	+362	+364	+371	+377	+388
+35	+316	+316	+315	+318	+321	+323	+328	+334	+344
+30	+271	+266	+266	+266	+268	+273	+279	+287	+294
+25	+208	+208	+200	+199	+204	+209	+217	+223	+232
+20	+147	+143	+143	+136	+137	+140	+147	+155	+163
+15	+ 76	+ 70	+ 63	+ 67	+ 70	+ 72	+ 73	+ 80	+ 86
+10	+ 8	0	- 2	- 3	- 3	- 2	- 2	- 2	+ 10
+ 5	- 56	- 66	- 71	- 75	- 74	- 74	- 74	- 68	- 62
0	-113	-125	-130	-133	-140	-140	-139	-138	-131
- 5	-158	-172	-181	-183	-189	-193	-196	-194	-191
-10	-189	-204	-215	-232	-234	-237	-238	-238	-237
-15	-213	-229	-242	-249	-255	-264	-267	-267	-270
-20	-229	-244	-259	-268	-277	-283	-285	-288	-288
-25	-238	-253	-267	-277	-285	-290	-294	-300	-298
-30	-247	-263	-273	-278	-286	-292	-298	-301	-297
-35	-257	-268	-276	-284	-292	-298	-302	-301	-306
-40	-263	-274	-282	-287	-293	-301	-308	-312	-319
-45	-277	-287	-296	-301	-305	-312	-319	-325	-332
-50	-295	-302	-308	-315	-319	-325	-330	-333	-339
-55	-310	-317	-323	-328	-334	-338	-344	-351	-359
-60	-337	-342	-348	-354	-361	-369	-380	-392	-404
-75	-373	-379	-386	-393	-403	-413	-424	-437	-451
-70	-427	-432	-440	-448	-455	-463	-473	-483	-493
-75	-478	-483	-488	-493	-499	-506	-512	-518	-525
-80	-520	-523	-527	-531	-536	-540	-545	-550	-556
-85	-560	-562	-564	-567	-569	-571	-575	-577	-580

[a] North latitudes positive, south latitudes negative

Table 49--Continued

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	+550	+552	+554	+556	+557	+559	+561	+562	+563
+80	+544	+547	+549	+553	+558	+562	+566	+569	+572
+75	+535	+539	+544	+549	+555	+562	+567	+573	+580
+70	+520	+531	+539	+546	+552	+557	+563	+572	+578
+65	+515	+523	+535	+542	+540	+552	+563	+572	+582
+60	+499	+510	+522	+540	+533	+547	+557	+567	+576
+55	+481	+490	+500	+510	+522	+532	+541	+552	+562
+50	+458	+470	+482	+494	+503	+510	+517	+527	+532
+45	+540	+548	+449	+459	+471	+478	+488	+498	+505
+40	+402	+407	+416	+425	+435	+444	+452	+455	+458
+35	+352	+363	+369	+377	+383	+390	+397	+399	+401
+30	+304	+308	+318	+326	+332	+336	+338	+340	+342
+25	+240	+248	+258	+264	+267	+273	+277	+273	+270
+20	+169	+175	+178	+182	+189	+200	+198	+185	+185
+15	+ 92	+100	+107	+113	+117	+118	+114	+107	+101
+10	+ 15	+ 22	+ 32	+ 37	+ 40	+ 34	+ 28	+ 20	+ 14
+ 5	- 56	- 50	- 46	- 41	- 40	- 44	- 54	- 62	- 72
0	-124	-119	-114	-112	-113	-113	-130	-141	-149
- 5	-187	-179	-176	-177	-179	-169	-196	-223	-228
-10	-233	-228	-228	-233	-238	-232	-256	-282	-293
-15	-267	-267	-271	-274	-281	-283	-308	-330	-345
-20	-290	-297	-297	-305	-317	-327	-345	-366	-386
-25	-299	-304	-313	-323	-336	-350	-372	-396	-418
-30	-303	-309	-316	-326	-344	-364	-389	-418	-440
-35	-311	-320	-328	-338	-356	-377	-406	-434	-455
-40	-329	-335	-341	-353	-369	-393	-418	-441	-473
-45	-338	-347	-356	-367	-385	-406	-427	-453	-486
-50	-345	-350	-361	-376	-395	-416	-441	-463	-497
-55	-367	-372	-386	-403	-422	-445	-466	-489	-509
-60	-413	-423	-436	-448	-462	-479	-494	-509	-529
-65	-464	-477	-490	-500	-510	-521	-532	-545	-560
-70	-502	-512	-522	-532	-542	-552	-562	-573	-586
-75	-532	-540	-549	-557	-566	-575	-584	-593	-602
-80	-562	-567	-573	-580	-587	-593	-599	-605	-611
-85	-584	-587	-591	-594	-598	-601	-604	-607	-611

[a] North latitudes positive, south latitudes negative

Table 49--Continued

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	+564	+565	+566	+567	+568	+568	+569	+569	+570
+80	+573	+574	+575	+576	+577	+578	+578	+579	+579
+80	+584	+588	+608	+604	+598	+597	+596	+594	+592
+70	+584	+591	+598	+604	+611	+615	+611	+603	+593
+65	+591	+598	+603	+608	+611	+612	+611	+607	+592
+60	+584	+590	+594	+597	+597	+596	+593	+587	+580
+55	+571	+574	+577	+578	+577	+576	+570	+560	+549
+50	+544	+548	+552	+553	+552	+548	+542	+538	+511
+45	+512	+516	+517	+517	+513	+510	+502	+487	+465
+40	+465	+467	+469	+467	+459	+459	+452	+436	+422
+35	+407	+408	+411	+410	+405	+396	+389	+378	+369
+30	+342	+342	+342	+339	+336	+333	+328	+318	+306
+25	+269	+268	+267	+264	+262	+259	+257	+252	+245
+20	+184	+185	+183	+182	+183	+187	+187	+182	+179
+15	+100	+ 97	+ 97	+ 98	+100	+108	+113	+109	+115
+10	+ 16	+ 10	+ 10	+ 19	+ 24	+ 30	+ 34	+ 37	+ 40
+ 5	- 78	- 75	- 71	- 65	- 54	- 48	- 44	- 40	- 35
0	-153	-160	-153	-148	-140	-129	-118	-111	-105
- 5	-230	-238	-232	-226	-211	-205	-196	-187	-180
-10	-300	-306	-301	-292	-286	-280	-271	-258	-251
-15	-362	-367	-364	-363	-357	-350	-343	-334	-329
-20	-404	-412	-418	-423	-418	-412	-406	-400	-394
-25	-439	-458	-469	-474	-472	-467	-464	-467	-463
-30	-467	-491	-506	-513	-516	-516	-513	-513	-513
-35	-484	-508	-530	-538	-554	-557	-557	-557	-557
-40	-502	-524	-547	-562	-574	-580	-585	-592	-591
-45	-510	-530	-553	-580	-598	-607	-613	-617	-617
-50	-515	-540	-569	-594	-615	-629	-642	-649	-649
-55	-532	-559	-586	-610	-632	-643	-652	-662	-669
-60	-553	-579	-603	-619	-628	-638	-651	-663	-677
-65	-573	-598	-617	-628	-638	-648	-659	-670	-681
-70	-598	-611	-622	-633	-644	-654	-663	-672	-680
-75	-611	-619	-629	-638	-647	-655	-662	-668	-672
-80	-617	-623	-631	-637	-643	-648	-653	-656	-659
-85	-614	-617	-620	-623	-626	-629	-632	-633	-635

[a] North latitudes positive, south latitudes negative

Table 49--Continued

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	+570	+570	+570	+571	+571	+571	+571	+570	+570
+80	+579	+579	+579	+578	+577	+576	+575	+574	+574
+75	+588	+585	+582	+580	+577	+573	+570	+568	+567
+70	+580	+576	+573	+572	+568	+562	+557	+554	+553
+65	+576	+568	+561	+555	+549	+538	+534	+533	+539
+60	+564	+554	+543	+533	+523	+513	+504	+505	+503
+55	+537	+528	+522	+511	+494	+482	+479	+464	+462
+50	+498	+484	+476	+458	+439	+433	+424	+419	+418
+45	+454	+444	+422	+407	+394	+386	+380	+376	+373
+40	+406	+391	+376	+358	+347	+338	+332	+330	+332
+35	+352	+336	+323	+310	+300	+293	+288	+288	+290
+30	+292	+283	+269	+262	+252	+247	+245	+245	+247
+25	+233	+225	+215	+210	+206	+203	+201	+203	+210
+20	+172	+165	+158	+154	+152	+152	+151	+162	+168
+15	+109	+108	+103	+101	+102	+105	+109	+117	+123
+10	+ 42	+ 41	+ 46	+ 46	+ 46	+ 52	+ 56	+ 70	+ 78
+ 5	- 26	- 23	- 23	- 18	- 12	- 3	- 1	+ 10	+ 23
0	-101	-100	- 96	- 87	- 77	- 71	- 62	- 45	- 41
- 5	-175	-170	-163	-156	-148	-139	-132	-120	-108
-10	-248	-242	-233	-228	-219	-211	-198	-189	-179
-15	-321	-314	-308	-298	-290	-282	-274	-260	-252
-20	-389	-385	-374	-367	-353	-349	-340	-332	-317
-25	-453	-444	-437	-431	-422	-412	-400	-388	-377
-30	-505	-497	-491	-486	-478	-464	-453	-445	-433
-35	-554	-549	-541	-534	-527	-512	-500	-490	-481
-40	-592	-589	-582	-576	-569	-557	-544	-534	-522
-45	-614	-617	-613	-611	-599	-591	-582	-573	-565
-50	-644	-648	-639	-642	-630	-619	-616	-604	-593
-55	-667	-665	-666	-669	-663	-657	-651	-642	-629
-60	-679	-679	-682	-685	-682	-678	-674	-670	-663
-65	-692	-700	-700	-701	-698	-694	-690	-683	-677
-70	-687	-692	-697	-697	-696	-693	-688	-682	-675
-75	-676	-679	-681	-681	-680	-679	-678	-676	-673
-80	-661	-663	-663	-663	-662	-662	-661	-659	-657
-85	-637	-637	-638	-638	-638	-637	-637	-636	-634

[a] North latitudes positive, south latitudes negative

Table 49--Continued

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	+570	+570	+570	+569	+569	+569	+568	+568	+567
+80	+573	+573	+573	+574	+574	+575	+576	+577	+578
+75	+565	+564	+565	+566	+567	+569	+572	+575	+578
+70	+551	+549	+551	+552	+555	+558	+564	+570	+575
+65	+538	+528	+528	+531	+539	+543	+550	+558	+565
+60	+508	+508	+508	+511	+518	+520	+532	+540	+549
+55	+463	+467	+469	+475	+482	+492	+503	+514	+527
+50	+418	+423	+426	+433	+443	+458	+472	+486	+499
+45	+373	+380	+387	+397	+409	+420	+431	+444	+462
+40	+337	+342	+348	+358	+369	+381	+394	+407	+422
+35	+294	+299	+308	+319	+331	+345	+357	+368	+385
+30	+255	+262	+271	+279	+291	+307	+318	+330	+343
+25	+217	+227	+237	+243	+255	+263	+273	+282	+294
+20	+175	+184	+193	+202	+212	+223	+227	+236	+245
+15	+130	+137	+146	+156	+168	+177	+183	+187	+194
+10	+ 84	+ 90	+ 97	+107	+117	+125	+132	+134	+138
+ 5	+ 29	+ 39	+ 47	+ 56	+ 64	+ 67	+ 73	+ 78	+ 83
0	- 32	- 22	- 12	- 7	+ 2	+ 8	+ 14	+ 18	+ 22
- 5	- 98	- 90	- 80	- 70	- 63	- 56	- 48	- 42	- 38
-10	-168	-157	-149	-136	-123	-118	-112	-103	- 97
-15	-240	-225	-217	-202	-190	-181	-171	-161	-152
-20	-303	-288	-278	-266	-248	-240	-227	-217	-208
-25	-363	-351	-337	-322	-311	-297	-286	-272	-263
-30	-417	-406	-393	-377	-363	-353	-336	-322	-310
-35	-470	-456	-441	-425	-411	-399	-386	-371	-359
-40	-507	-496	-481	-457	-444	-438	-428	-414	-408
-45	-547	-537	-525	-508	-492	-481	-474	-466	-454
-50	-583	-575	-563	-555	-543	-529	-514	-501	-489
-55	-617	-603	-600	-592	-577	-567	-556	-543	-528
-60	-654	-641	-630	-619	-610	-603	-597	-585	-572
-65	-667	-658	-650	-641	-634	-628	-619	-609	-598
-70	-667	-660	-654	-648	-642	-636	-629	-620	-611
-75	-668	-662	-657	-651	-647	-643	-638	-629	-619
-80	-656	-653	-650	-648	-645	-643	-637	-627	-621
-85	-632	-630	-628	-626	-623	-620	-617	-615	-612

[a] North latitudes positive, south latitudes negative

Table 49--Continued

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	+567	+567	+566	+565	+564	+563	+563	+562	+561
+80	+579	+580	+580	+579	+578	+577	+575	+573	+572
+75	+581	+584	+586	+587	+586	+585	+584	+583	+582
+70	+581	+586	+590	+593	+593	+592	+589	+587	+584
+65	+573	+582	+588	+593	+599	+602	+602	+600	+597
+60	+562	+574	+584	+592	+601	+604	+607	+609	+614
+55	+541	+552	+566	+579	+589	+600	+604	+608	+611
+50	+512	+528	+543	+556	+569	+580	+588	+593	+599
+45	+477	+493	+512	+525	+538	+547	+558	+573	+574
+40	+442	+457	+473	+487	+502	+516	+522	+533	+544
+35	+395	+412	+430	+439	+459	+474	+483	+498	+507
+30	+352	+368	+383	+396	+408	+422	+434	+447	+462
+25	+306	+318	+332	+342	+358	+372	+400	+393	+406
+20	+253	+263	+276	+285	+298	+315	+325	+341	+349
+15	+202	+207	+215	+224	+235	+251	+267	+282	+287
+10	+142	+149	+156	+163	+173	+182	+195	+209	+222
+ 5	+ 87	+ 90	+ 96	+103	+110	+118	+129	+144	+161
0	+ 24	+ 29	+ 36	+ 43	+ 49	+ 56	+ 63	+ 76	+ 98
- 5	- 34	- 29	- 23	- 16	- 8	- 11	+ 10	+ 22	+ 38
-10	- 92	- 82	- 74	- 67	- 64	- 61	- 50	- 34	- 18
-15	-145	-134	-126	-120	-116	-104	- 96	- 84	- 70
-20	-196	-186	-177	-171	-167	-157	-144	-131	-118
-25	-245	-234	-228	-218	-210	-203	-190	-176	-163
-30	-300	-286	-275	-267	-257	-247	-233	-220	-207
-35	-349	-336	-325	-313	-303	-293	-277	-265	-247
-40	-393	-383	-372	-358	-347	-329	-320	-304	-282
-45	-437	-423	-414	-405	-391	-375	-362	-342	-315
-50	-476	-463	-453	-443	-429	-414	-397	-370	-358
-55	-517	-508	-500	-490	-475	-456	-438	-420	-397
-60	-563	-552	-540	-535	-517	-498	-473	-453	-433
-65	-585	-573	-560	-547	-531	-516	-498	-478	-460
-70	-601	-589	-577	-563	-549	-533	-519	-505	-490
-75	-610	-600	-589	-578	-567	-556	-544	-532	-522
-80	-613	-607	-598	-591	-583	-574	-567	-560	-553
-85	-608	-605	-602	-598	-594	-590	-586	-582	-579

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[a] North latitudes positive, south latitudes negative

Table 49--Continued

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	+559	+558	+557	+555	+553	+552	+550	+548	+547
+80	+569	+567	+562	+559	+556	+553	+551	+547	+543
+75	+580	+577	+573	+568	+563	+558	+552	+546	+540
+70	+581	+578	+575	+572	+569	+564	+559	+552	+545
+65	+593	+587	+582	+578	+579	+572	+562	+553	+539
+60	+608	+600	+591	+582	+577	+564	+553	+543	+533
+55	+606	+601	+593	+583	+573	+562	+549	+536	+523
+50	+598	+593	+586	+576	+566	+553	+538	+523	+518
+45	+577	+576	+568	+562	+551	+537	+523	+507	+491
+40	+548	+548	+547	+541	+527	+515	+502	+481	+465
35	512	513							
+35	+512	+513	+511	+507	+499	+483	+470	+448	+435
+30	+468	+472	+474	+472	+464	+452	+441	+421	+402
+25	+417	+422	+426	+425	+420	+413	+404	+387	+367
+20	+361	+369	+372	+381	+376	+368	+355	+344	+325
+15	+297	+307	+318	+322	+318	+318	+309	+301	+281
+10	+235	+247	+258	+263	+267	+266	+258	+251	+234
+ 5	+174	+186	+198	+204	+209	+209	+207	+195	+181
0	+112	+125	+137	+145	+150	+162	+149	+139	+125
- 5	+ 53	+ 67	+ 76	+ 86	+ 92	+ 95	+ 94	+ 88	+ 73
-10	- 4	+ 8	+ 23	+ 32	+ 42	+ 47	+ 44	+ 37	+ 25
-15	- 55	- 42	- 29	- 16	- 8	- 2	- 3	- 8	- 18
-20	-107	- 92	- 73	- 58	- 48	- 42	- 43	- 46	- 53
-25	-147	-130	-112	- 98	- 88	- 81	- 77	- 78	- 83
-30	-187	-167	-147	-132	-122	-113	-107	-107	-111
-35	-223	-202	-181	-163	-150	-142	-136	-134	-134
-40	-258	-238	-212	-196	-184	-173	-166	-162	-160
-45	-294	-276	-255	-236	-220	-207	-198	-196	-193
-50	-333	-310	-293	-275	-259	-246	-236	-230	-227
-55	-375	-355	-335	-318	-302	-288	-280	-272	-268
-60	-412	-396	-378	-364	-353	-342	-331	-322	-317
-65	-443	-427	-413	-402	-394	-391	-381	-373	-368
-70	-477	-465	-454	-444	-437	-429	-424	-421	-418
-75	-512	-502	-494	-487	-481	-476	-471	-468	-466
-80	-547	-540	-534	-529	-525	-521	-518	-515	-513
-85	-576	-573	-569	-567	-565	-563	-560	-559	-558

[a] North latitudes positive, south latitudes negative

Table 49--Concluded

Values of vertical component (Z) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	+546	+544	+543	+541	+540	+538	+537	+536	+535
+80	+539	+534	+530	+526	+522	+519	+517	+517	+518
+75	+534	+528	+523	+518	+514	+511	+511	+513	+515
+70	+537	+528	+521	+513	+508	+505	+503	+503	+502
+65	+528	+519	+514	+509	+503	+498	+493	+489	+488
+60	+523	+512	+502	+493	+488	+481	+474	+469	+469
+55	+509	+498	+488	+478	+469	+463	+457	+453	+452
+50	+492	+482	+472	+462	+448	+438	+434	+429	+426
+45	+471	+457	+443	+433	+422	+413	+410	+407	+402
+40	+448	+428	+412	+407	+397	+386	+378	+367	+362
+35	+413	+394	+377	+368	+355	+345	+337	+327	+321
+30	+382	+362	+342	+322	+307	+298	+285	+277	+275
+25	+344	+322	+297	+276	+258	+247	+233	+227	+215
+20	+304	+278	+255	+233	+211	+191	+174	+160	+152
+15	+258	+237	+209	+187	+162	+135	+112	+ 97	+ 83
+10	+214	+187	+162	+133	+106	+ 80	+ 52	+ 33	+ 21
+ 5	+158	+136	+109	+ 82	+ 52	+ 20	- 7	- 28	- 42
0	+107	+ 84	+ 58	+ 30	- 1	- 27	- 54	- 78	- 97
- 5	+ 58	+ 35	+ 8	- 18	- 42	- 68	- 98	-118	-139
-10	+ 12	- 12	- 33	- 57	- 82	-105	-128	-151	-170
-15	- 32	- 48	- 69	- 90	-112	-133	-155	-176	-194
-20	- 65	- 80	- 98	-118	-137	-156	-175	-192	-212
-25	- 94	-107	-123	-140	-157	-173	-188	-207	-223
-30	-118	-128	-143	-156	-172	-187	-202	-217	-232
-35	-142	-148	-158	-171	-183	-199	-213	-228	-242
-40	-163	-169	-177	-188	-198	-212	-228	-238	-251
-45	-194	-196	-204	-212	-222	-232	-243	-253	-264
-50	-226	-229	-234	-240	-248	-255	-263	-272	-283
-55	-266	-265	-266	-268	-273	-278	-287	-296	-304
-60	-312	-311	-310	-311	-313	-317	-322	-327	-332
6									
-65	-363	-361	-360	-359	-359	-360	-362	-366	-369
-70	-418	-415	-413	-412	-412	-413	-414	-417	-421
-75	-464	-463	-463	-463	-464	-465	-467	-470	-473
-80	-512	-511	-511	-511	-512	-512	-513	-515	-517
-85	-557	-556	-555	-555	-555	-556	-557	-559	-559

[a] North latitudes positive, south latitudes negative

Table 50

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	+ 47	+ 47	+ 48	+ 49	+ 50	+ 49	+ 49	+ 48	+ 46
+80	+ 69	+ 71	+ 71	+ 71	+ 70	+ 69	+ 67	+ 66	+ 64
+75	+ 90	+ 92	+ 92	+ 93	+ 91	+ 89	+ 87	+ 86	+ 83
+70	+107	+110	+110	+111	+110	+109	+106	+105	+102
+65	+124	+126	+126	+126	+126	+127	+126	+126	+124
+60	+141	+146	+151	+149	+148	+149	+150	+146	+146
+55	+164	+167	+171	+172	+172	+173	+175	+174	+173
+50	+190	+193	+195	+197	+198	+199	+197	+200	+200
+45	+213	+218	+220	+222	+222	+222	+222	+224	+224
+40	+238	+242	+246	+248	+249	+251	+253	+253	+253
+35	+264	+267	+270	+273	+276	+278	+280	+283	+280
+30	+288	+292	+295	+296	+297	+300	+304	+306	+308
+25	+305	+312	+312	+312	+314	+318	+326	+329	+331
+20	+316	+323	+326	+327	+332	+334	+340	+344	+347
+15	+321	+329	+331	+334	+339	+344	+346	+349	+355
+10	+312	+318	+324	+329	+333	+339	+343	+347	+351
+ 5	+297	+303	+310	+313	+317	+326	+332	+334	+338
0	+276	+282	+285	+288	+294	+300	+309	+313	+318
− 5	+250	+254	+257	+262	+266	+271	+276	+281	+288
−10	+226	+227	+230	+231	+234	+239	+244	+247	+255
−15	+199	+200	+199	+203	+203	+208	+211	+214	+218
−20	+178	+177	+178	+177	+175	+176	+179	+183	+185
−25	+159	+157	+156	+156	+154	+151	+151	+155	+161
−30	+148	+145	+140	+138	+136	+136	+133	+134	+141
−35	+142	+136	+131	+130	+127	+125	+125	+129	+130
−40	+140	+134	+130	+126	+124	+124	+124	+124	+125
−45	+144	+139	+133	+128	+125	+125	+125	+125	+126
−50	+153	+146	+139	+136	+132	+132	+132	+131	+131
−55	+162	+153	+146	+141	+136	+134	+133	+134	+132
−60	+162	+153	+147	+142	+137	+134	+131	+131	+130
−65	+161	+153	+147	+142	+138	+134	+134	+132	+133
−70	+162	+154	+149	+144	+140	+138	+136	+135	+129
−75	+165	+160	+152	+150	+142	+136	+130	+124	+116
−80	+164	+155	+146	+137	+126	+115	+104	+ 92	+ 81
−85	+146	+138	+129	+118	+106	+ 94	+ 81	+ 67	+ 52

[a] North latitudes positive, south latitudes negative

Table 50--Continued

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	+ 45	+ 43	+ 41	+ 38	+ 35	+ 30	+ 26	+ 21	+ 17
+80	+ 62	+ 58	+ 55	+ 50	+ 44	+ 39	+ 36	+ 32	+ 28
+75	+ 80	+ 77	+ 73	+ 68	+ 64	+ 59	+ 55	+ 52	+ 48
+70	+ 99	+ 94	+ 91	+ 87	+ 84	+ 80	+ 76	+ 72	+ 69
+65	+120	+118	+116	+113	+110	+107	+103	+100	+ 98
+60	+144	+144	+142	+141	+138	+137	+135	+133	+128
+55	+171	+170	+169	+169	+168	+168	+168	+168	+165
+50	+199	+200	+199	+196	+198	+199	+200	+201	+206
+45	+226	+226	+226	+227	+228	+228	+230	+238	+241
+40	+251	+255	+257	+260	+262	+265	+269	+275	+282
+35	+283	+285	+286	+288	+292	+297	+302	+309	+313
+30	+311	+313	+315	+319	+322	+329	+334	+338	+345
+25	+333	+336	+338	+343	+348	+353	+359	+366	+373
+20	+351	+354	+358	+362	+367	+373	+380	+386	+391
+15	+360	+364	+367	+372	+377	+383	+390	+396	+401
+10	+356	+361	+365	+372	+378	+382	+387	+395	+402
+ 5	+342	+347	+354	+362	+367	+374	+380	+389	+394
0	+325	+327	+332	+342	+349	+356	+361	+369	+379
- 5	+297	+300	+305	+314	+323	+330	+336	+342	+351
-10	+262	+267	+272	+281	+292	+300	+308	+314	+323
-15	+225	+235	+241	+250	+257	+265	+274	+282	+292
-20	+191	+198	+211	+219	+224	+230	+237	+247	+256
-25	+166	+171	+177	+186	+192	+198	+206	+214	+221
-30	+148	+154	+160	+163	+169	+174	+180	+184	+191
-35	+136	+141	+145	+150	+153	+156	+159	+162	+165
-40	+128	+132	+135	+138	+139	+142	+142	+143	+149
-45	+127	+132	+133	+133	+133	+132	+131	+130	+128
-50	+132	+132	+132	+131	+128	+124	+121	+116	+116
-55	+131	+129	+132	+130	+126	+120	+115	+110	+106
-60	+131	+132	+130	+125	+120	+114	+106	+ 99	+ 90
-65	+130	+127	+122	+119	+112	+104	+ 95	+ 87	+ 77
-70	+125	+120	+113	+104	+ 95	+ 86	+ 75	+ 66	+ 54
-75	+106	+ 96	+ 86	+ 75	+ 64	+ 54	+ 42	+ 32	+ 16
-80	+ 68	+ 56	+ 44	+ 31	+ 16	+ 4	- 10	- 27	- 38
-85	+ 38	+ 23	+ 9	- 6	- 20	- 34	- 47	- 61	- 73

[a] North latitudes positive, south latitudes negative

Table 50--Continued

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	+ 15	+ 14	+ 13	+ 13	+ 14	+ 15	+ 15	+ 15	+ 15
+80	+ 27	+ 27	+ 27	+ 26	+ 26	+ 26	+ 28	+ 29	+ 31
+75	+ 45	+ 44	+ 46	+ 45	+ 47	+ 48	+ 50	+ 53	+ 56
+70	+ 69	+ 68	+ 69	+ 69	+ 70	+ 71	+ 73	+ 76	+ 80
+65	+ 96	+ 96	+ 96	+ 98	+ 98	+ 99	+101	+107	+114
+60	+130	+129	+130	+131	+132	+139	+145	+143	+157
+55	+169	+168	+168	+165	+167	+171	+178	+183	+189
+50	+204	+208	+209	+212	+214	+217	+216	+219	+223
+45	+244	+245	+247	+250	+252	+254	+255	+256	+250
+40	+286	+287	+288	+288	+288	+289	+288	+287	+285
+35	+318	+320	+323	+324	+323	+320	+315	+312	+310
+30	+350	+353	+354	+354	+351	+347	+342	+337	+331
+25	+377	+379	+379	+378	+374	+368	+362	+356	+348
+20	+394	+397	+397	+394	+391	+384	+377	+370	+362
+15	+404	+406	+405	+404	+400	+394	+387	+380	+373
+10	+406	+410	+411	+407	+403	+398	+393	+387	+381
+ 5	+400	+402	+403	+402	+400	+397	+393	+388	+383
0	+385	+388	+389	+390	+391	+391	+388	+386	+381
- 5	+360	+368	+371	+374	+377	+377	+375	+374	+375
-10	+333	+341	+345	+351	+357	+359	+359	+361	+363
-15	+302	+310	+318	+325	+331	+336	+340	+346	+349
-20	+266	+277	+287	+297	+304	+312	+318	+323	+325
-25	+233	+244	+253	+263	+273	+280	+289	+295	+297
-30	+201	+210	+219	+228	+239	+251	+255	+261	+266
-35	+172	+178	+187	+193	+204	+212	+220	+226	+231
-40	+148	+156	+157	+161	+168	+176	+185	+190	+196
-45	+128	+130	+132	+133	+140	+145	+149	+154	+160
-50	+114	+114	+112	+110	+111	+116	+118	+122	+127
-55	+102	+ 98	+ 94	+ 91	+ 87	+ 87	+ 90	+ 93	+ 96
-60	+ 85	+ 81	+ 77	+ 71	+ 67	+ 64	+ 61	+ 60	+ 60
-65	+ 68	+ 59	+ 53	+ 45	+ 42	+ 36	+ 30	+ 25	+ 21
-70	+ 39	+ 27	+ 17	+ 10	+ 10	+ 9	+ 9	+ 10	+ 9
-75	+ 3	- 9	- 18	- 24	- 27	- 27	- 26	- 23	- 23
-80	- 48	- 58	- 65	- 72	- 80	- 85	- 89	- 91	- 92
-85	- 83	- 93	-102	-110	-116	-121	-126	-129	-131

[a] North latitudes positive, south latitudes negative

Table 50--Continued

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	+ 15	+ 15	+ 15	+ 14	+ 14	+ 14	+ 13	+ 12	+ 11
+80	+ 33	+ 35	+ 36	+ 36	+ 37	+ 37	+ 36	+ 36	+ 35
+75	+ 58	+ 62	+ 64	+ 66	+ 68	+ 72	+ 72	+ 73	+ 72
+70	+ 86	+ 91	+ 97	+102	+104	+108	+110	+112	+111
+65	+120	+127	+136	+140	+142	+147	+149	+151	+152
+60	+158	+165	+170	+172	+176	+182	+183	+185	+188
+55	+192	+194	+200	+204	+208	+211	+210	+208	+206
+50	+226	+229	+233	+233	+232	+232	+232	+231	+228
+45	+253	+258	+258	+259	+255	+252	+248	+246	+241
+40	+284	+281	+278	+276	+273	+268	+264	+257	+252
+35	+306	+301	+299	+290	+286	+281	+276	+270	+264
+30	+324	+318	+312	+307	+300	+293	+286	+280	+274
+25	+342	+333	+328	+322	+312	+304	+297	+290	+285
+20	+353	+345	+338	+331	+322	+314	+308	+301	+296
+15	+365	+356	+347	+339	+334	+328	+321	+313	+308
+10	+372	+365	+358	+349	+344	+339	+332	+330	+324
+ 5	+376	+370	+363	+359	+352	+350	+344	+340	+338
0	+376	+372	+367	+364	+360	+357	+353	+349	+347
- 5	+373	+371	+367	+363	+362	+361	+359	+356	+356
-10	+365	+363	+361	+359	+357	+356	+355	+354	+352
-15	+350	+351	+349	+346	+346	+345	+346	+345	+342
-20	+329	+333	+330	+329	+329	+329	+328	+327	+325
-25	+300	+301	+304	+305	+305	+305	+304	+306	+308
-30	+269	+272	+275	+276	+278	+279	+280	+281	+282
-35	+236	+239	+243	+245	+248	+252	+255	+256	+257
-40	+202	+206	+210	+213	+216	+220	+224	+228	+231
-45	+166	+171	+174	+176	+181	+186	+192	+196	+190
-50	+132	+137	+138	+142	+148	+154	+158	+162	+172
-55	+ 98	+102	+106	+110	+116	+120	+123	+128	+136
-60	+ 60	+ 62	+ 64	+ 67	+ 72	+ 78	+ 85	+ 91	+ 97
-65	+ 22	+ 22	+ 22	+ 26	+ 26	+ 29	+ 32	+ 39	+ 47
-70	+ 7	+ 3	- 7	- 9	- 16	- 11	- 2	+ 10	+ 16
-75	- 25	- 29	- 35	- 37	- 35	- 31	- 26	- 23	- 16
-80	- 94	- 94	- 94	- 94	- 92	- 88	- 83	- 76	- 67
-85	-132	-133	-134	-134	-132	-130	-127	-124	-120

[a] North latitudes positive, south latitudes negative

Table 50--Continued

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	+ 10	+ 9	+ 9	+ 8	+ 7	+ 6	+ 4	+ 2	0
+80	+ 33	+ 31	+ 29	+ 27	+ 24	+ 20	+ 17	+ 14	+ 12
+75	+ 70	+ 67	+ 64	+ 60	+ 55	+ 49	+ 42	+ 35	+ 29
+70	+112	+109	+105	+102	+ 96	+ 89	+ 82	+ 74	+ 62
+65	+150	+144	+140	+134	+127	+121	+112	+104	+ 96
+60	+184	+178	+172	+165	+157	+151	+143	+134	+125
+55	+203	+199	+196	+188	+184	+178	+172	+165	+154
+50	+225	+220	+214	+210	+203	+197	+191	+187	+184
+45	+237	+236	+230	+225	+222	+219	+214	+210	+208
+40	+247	+243	+240	+237	+234	+231	+231	+229	+228
+35	+257	+252	+250	+248	+246	+245	+245	+245	+245
+30	+269	+265	+262	+260	+259	+258	+259	+260	+263
+25	+280	+276	+274	+272	+271	+271	+272	+276	+278
+20	+292	+288	+286	+285	+283	+282	+287	+290	+293
+15	+305	+301	+300	+300	+299	+298	+301	+302	+306
+10	+320	+318	+317	+316	+314	+313	+315	+317	+318
+ 5	+335	+334	+332	+330	+328	+326	+326	+326	+326
0	+346	+343	+342	+339	+336	+335	+332	+331	+330
- 5	+356	+354	+350	+347	+342	+337	+333	+330	+327
-10	+350	+349	+346	+342	+339	+334	+330	+327	+323
-15	+340	+339	+336	+334	+331	+328	+324	+320	+316
-20	+327	+325	+322	+319	+317	+315	+312	+311	+308
-25	+309	+306	+304	+303	+301	+300	+299	+299	+298
-30	+284	+284	+284	+284	+283	+283	+284	+284	+284
-35	+259	+260	+262	+264	+264	+265	+265	+267	+269
-40	+234	+236	+238	+239	+241	+245	+248	+251	+253
-45	+204	+207	+212	+216	+220	+224	+230	+233	+236
-50	+177	+181	+186	+191	+196	+199	+205	+211	+215
-55	+144	+151	+156	+163	+166	+171	+175	+181	+187
-60	+104	+112	+118	+127	+133	+140	+144	+150	+156
-65	+ 59	+ 67	+ 75	+ 84	+ 94	+102	+110	+117	+124
-70	+ 25	+ 34	+ 40	+ 48	+ 56	+ 62	+ 69	+ 76	+ 82
-75	- 6	+ 4	+ 10	+ 15	+ 20	+ 25	+ 30	+ 36	+ 41
-80	- 61	- 56	- 50	- 43	- 32	- 24	- 14	- 2	+ 4
-85	-116	-110	-104	- 95	- 85	- 75	- 64	- 53	- 42

[a] North latitudes positive, south latitudes negative

Table 50--Continued

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	- 4	- 8	- 12	- 15	- 17	- 18	- 19	- 18	- 16
+80	+ 8	+ 5	+ 1	- 2	- 3	- 6	- 9	- 10	- 10
+75	+ 24	+ 18	+ 13	+ 8	+ 4	+ 1	- 1	+ 4	- 7
+70	+ 53	+ 42	+ 33	+ 27	+ 21	+ 17	+ 14	+ 13	+ 12
+65	+ 86	+ 78	+ 67	+ 55	+ 46	+ 42	+ 37	+ 32	+ 30
+60	+115	+108	+100	+ 90	+ 82	+ 74	+ 68	+ 62	+ 58
+55	+148	+139	+129	+122	+114	+107	+ 99	+ 95	+ 86
+50	+178	+170	+164	+156	+150	+143	+136	+129	+121
+45	+199	+194	+188	+190	+181	+180	+171	+165	+155
+40	+225	+224	+220	+220	+214	+210	+203	+199	+191
+35	+246	+246	+245	+243	+240	+234	+237	+230	+224
+30	+264	+268	+268	+267	+261	+267	+264	+259	+251
+25	+280	+281	+284	+286	+287	+290	+290	+283	+277
+20	+296	+298	+301	+302	+303	+306	+307	+303	+298
+15	+308	+310	+312	+315	+317	+318	+318	+317	+313
+10	+318	+320	+322	+323	+323	+326	+325	+323	+321
+ 5	+326	+328	+329	+328	+328	+329	+329	+328	+323
0	+330	+328	+325	+324	+324	+328	+327	+326	+322
- 5	+326	+323	+321	+318	+318	+321	+320	+317	+316
-10	+321	+318	+316	+312	+311	+310	+307	+307	+306
-15	+315	+312	+307	+304	+302	+300	+296	+296	+295
-20	+304	+300	+300	+297	+295	+289	+286	+285	+282
-25	+294	+291	+289	+288	+285	+279	+278	+275	+271
-30	+282	+281	+278	+275	+274	+271	+267	+265	+259
-35	+268	+268	+266	+264	+264	+260	+258	+254	+252
-40	+253	+254	+254	+253	+253	+252	+248	+246	+243
-45	+239	+240	+240	+240	+240	+240	+239	+238	+237
-50	+218	+220	+222	+223	+224	+226	+226	+228	+230
-55	+191	+195	+198	+202	+206	+208	+213	+217	+221
-60	+162	+166	+170	+177	+182	+189	+193	+199	+206
-65	+130	+137	+143	+149	+157	+164	+171	+177	+186
-70	+ 88	+ 96	+102	+111	+119	+126	+132	+143	+152
-75	+ 46	+ 51	+ 57	+ 66	+ 74	+ 82	+ 94	+105	+118
-80	+ 11	+ 20	+ 28	+ 37	+ 47	+ 56	+ 68	+ 79	+ 91
-85	- 30	- 18	- 5	+ 8	+ 21	+ 34	+ 48	+ 61	+ 74

[a] North latitudes positive, south latitudes negative

Table 50--Continued

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	- 13	- 12	- 8	- 5	- 1	+ 3	+ 6	+ 9	+ 14
+80	- 8	- 6	- 4	- 3	0	+ 6	+ 11	+ 17	+ 22
+75	- 8	- 5	- 2	+ 4	+ 11	+ 16	+ 22	+ 27	+ 33
+70	+ 11	+ 12	+ 14	+ 18	+ 24	+ 32	+ 41	+ 48	+ 48
+65	+ 31	+ 32	+ 32	+ 33	+ 38	+ 46	+ 51	+ 60	+ 67
+60	+ 55	+ 53	+ 53	+ 56	+ 58	+ 72	+ 73	+ 80	+ 89
+55	+ 84	+ 80	+ 81	+ 85	+ 93	+104	+ 96	+103	+112
+50	+116	+114	+113	+111	+114	+124	+122	+127	+135
+45	+157	+152	+145	+143	+142	+144	+148	+152	+154
+40	+186	+182	+176	+171	+171	+170	+171	+173	+180
+35	+217	+214	+205	+201	+196	+196	+195	+197	+198
+30	+246	+242	+233	+228	+225	+219	+216	+215	+216
+25	+270	+265	+258	+253	+248	+243	+240	+236	+236
+20	+295	+290	+281	+273	+269	+262	+256	+254	+253
+15	+308	+303	+297	+292	+286	+280	+272	+269	+267
+10	+318	+313	+308	+303	+298	+292	+284	+280	+276
+ 5	+321	+319	+314	+308	+304	+297	+293	+288	+284
0	+315	+319	+314	+310	+305	+301	+295	+289	+285
- 5	+315	+312	+308	+304	+299	+294	+289	+282	+278
-10	+306	+304	+299	+296	+291	+285	+280	+273	+268
-15	+292	+289	+286	+284	+278	+273	+268	+262	+254
-20	+278	+276	+274	+270	+267	+262	+256	+249	+243
-25	+267	+264	+262	+258	+254	+250	+245	+238	+231
-30	+257	+254	+252	+249	+245	+241	+236	+228	+221
-35	+248	+246	+243	+241	+238	+235	+230	+222	+216
-40	+240	+240	+239	+237	+236	+234	+229	+223	+217
-45	+237	+237	+238	+239	+237	+235	+231	+227	+222
-50	+234	+235	+236	+239	+239	+237	+235	+232	+227
-55	+226	+230	+233	+237	+240	+240	+239	+236	+233
-60	+212	+218	+223	+229	+233	+237	+238	+238	+236
-65	+193	+200	+207	+213	+220	+224	+227	+231	+233
-70	+160	+166	+174	+180	+187	+196	+207	+215	+219
-75	+128	+137	+146	+154	+162	+169	+176	+185	+192
-80	+104	+115	+124	+135	+142	+151	+157	+165	+170
-85	+ 86	+ 98	+110	+120	+128	+138	+146	+153	+159

[a] North latitudes positive, south latitudes negative

Table 50--Concluded

Values of north component (X) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	+ 18	+ 22	+ 26	+ 30	+ 36	+ 38	+ 42	+ 44	+ 45
+80	+ 28	+ 33	+ 39	+ 44	+ 50	+ 55	+ 60	+ 66	+ 68
+75	+ 39	+ 46	+ 52	+ 58	+ 63	+ 70	+ 79	+ 85	+ 88
+70	+ 55	+ 62	+ 69	+ 77	+ 85	+ 91	+ 96	+100	+103
+65	+ 74	+ 81	+ 89	+ 95	+101	+105	+110	+116	+121
+60	+ 96	+103	+110	+115	+122	+130	+135	+138	+140
+55	+123	+130	+135	+140	+144	+148	+155	+161	+162
+50	+142	+150	+156	+162	+168	+172	+177	+181	+185
+45	+162	+170	+178	+185	+189	+197	+200	+204	+209
+40	+185	+192	+199	+209	+211	+221	+224	+229	+234
+35	+204	+208	+215	+224	+231	+238	+244	+251	+261
+30	+221	+226	+235	+243	+249	+259	+269	+276	+284
+25	+237	+243	+248	+254	+263	+274	+284	+293	+299
+20	+253	+255	+260	+268	+276	+286	+294	+300	+311
+15	+266	+267	+271	+277	+283	+293	+301	+307	+315
+10	+278	+276	+278	+281	+286	+291	+298	+301	+308
+ 5	+282	+279	+278	+277	+280	+282	+286	+290	+293
0	+280	+275	+272	+270	+270	+270	+271	+273	+275
- 5	+272	+268	+261	+259	+255	+253	+249	+245	+248
+10	+262	+253	+250	+244	+240	+237	+227	+223	+227
-15	+247	+241	+235	+227	+219	+215	+206	+202	+200
-20	+236	+230	+219	+210	+203	+198	+190	+183	+181
-25	+224	+216	+205	+198	+190	+185	+178	+170	+164
-30	+213	+206	+196	+186	+180	+175	+168	+161	+155
-35	+209	+202	+192	+184	+176	+170	+163	+157	+150
-40	+207	+200	+192	+185	+176	+168	+161	+153	+147
-45	+214	+206	+199	+192	+183	+175	+167	+160	+152
-50	+222	+215	+207	+199	+191	+181	+174	+167	+159
-55	+227	+220	+212	+204	+196	+189	+182	+175	+169
-60	+231	+225	+218	+210	+203	+193	+187	+178	+170
-65	+231	+228	+224	+216	+207	+199	+190	+181	+170
-70	+222	+222	+221	+216	+209	+200	+192	+181	+172
-75	+198	+202	+205	+205	+202	+200	+192	+184	+175
-80	+175	+179	+182	+185	+185	+185	+182	+177	+172
-85	+163	+166	+169	+169	+169	+167	+164	+160	+154

[a] North latitudes positive, south latitudes negative

Table 51

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	-21	-18	-14	-8	-4	-2	+2	+4	+6
+80	-16	-12	-9	-6	0	+4	+9	+14	+17
+75	-19	-16	-10	-4	+1	+6	+11	+16	+22
+70	-25	-18	-12	-6	0	+6	+12	+17	+24
+65	-28	-19	-13	-8	0	+9	+15	+20	+26
+60	-28	-22	-16	-7	0	+8	+14	+22	+24
+55	-31	-26	-17	-6	-2	+5	+11	+17	+24
+50	-31	-24	-16	-8	-1	+6	+10	+17	+20
+45	-31	-24	-17	-9	-3	+5	+10	+15	+20
+40	-36	-27	-19	-11	-4	+3	+8	+13	+18
+35	-39	-30	-21	-13	-6	+1	+7	+11	+15
+30	-41	-32	-24	-16	-8	-2	+3	+8	+11
+25	-47	-37	-26	-18	-10	-4	+1	+5	+8
+20	-48	-40	-30	-22	-14	-8	-3	+2	+6
+15	-56	-44	-34	-23	-17	-11	-5	-1	+2
+10	-59	-48	-38	-28	-21	-14	-9	-5	-2
+ 5	-64	-54	-43	-34	-25	-20	-16	-10	-5
0	-70	-60	-48	-38	-32	-24	-20	-15	-10
- 5	-75	-65	-54	-47	-37	-30	-25	-18	-14
-10	-79	-70	-61	-52	-43	-37	-30	-22	-19
-15	-81	-72	-64	-55	-48	-42	-35	-29	-24
-20	-82	-74	-67	-59	-52	-44	-38	-33	-33
-25	-80	-75	-68	-60	-55	-47	-41	-39	-40
-30	-79	-75	-68	-63	-56	-50	-44	-42	-45
-35	-78	-74	-68	-63	-56	-51	-47	-47	-49
-40	-75	-73	-70	-63	-58	-56	-55	-56	-59
-45	-74	-73	-70	-65	-61	-61	-62	-64	-69
-50	-74	-73	-70	-68	-66	-67	-68	-71	-77
-55	-69	-71	-72	-73	-72	-73	-75	-80	-88
-60	-70	-73	-76	-78	-79	-84	-92	-101	-111
-65	-74	-78	-83	-90	-97	-104	-114	-122	-130
-70	-82	-91	-100	-108	-117	-120	-136	-146	-154
-75	-96	-105	-117	-126	-140	-150	-159	-167	-171
-80	-97	-112	-125	-136	-148	-157	-164	-170	-173
-85	-91	-104	-116	-126	-136	-144	-152	-158	-162

[a] North latitudes positive, south latitudes negative

Table 51--Continued

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	+ 10	+ 12	+ 15	+ 19	+ 23	+ 26	+ 28	+ 29	+ 30
+80	+ 20	+ 24	+ 26	+ 29	+ 32	+ 36	+ 35	+ 33	+ 30
+75	+ 28	+ 31	+ 33	+ 34	+ 36	+ 38	+ 38	+ 35	+ 28
+70	+ 30	+ 33	+ 35	+ 37	+ 38	+ 38	+ 37	+ 34	+ 31
+65	+ 30	+ 35	+ 38	+ 40	+ 40	+ 40	+ 40	+ 38	+ 36
+60	+ 29	+ 35	+ 36	+ 37	+ 38	+ 38	+ 36	+ 34	+ 30
+55	+ 31	+ 29	+ 32	+ 37	+ 37	+ 37	+ 34	+ 33	+ 28
+50	+ 27	+ 30	+ 30	+ 32	+ 32	+ 32	+ 31	+ 28	+ 21
+45	+ 24	+ 27	+ 27	+ 27	+ 28	+ 26	+ 22	+ 21	+ 18
+40	+ 20	+ 22	+ 24	+ 24	+ 23	+ 20	+ 18	+ 14	+ 11
+35	+ 18	+ 18	+ 19	+ 18	+ 17	+ 14	+ 12	+ 9	+ 6
+30	+ 14	+ 15	+ 15	+ 13	+ 11	+ 8	+ 4	+ 1	- 2
+25	+ 10	+ 11	+ 10	+ 8	+ 5	+ 2	- 2	- 6	- 8
+20	+ 7	+ 8	+ 6	+ 3	- 1	- 4	- 8	- 12	- 12
+15	+ 4	+ 4	+ 2	- 2	- 7	- 11	- 15	- 17	- 17
+10	0	+ 1	- 1	- 8	- 13	- 19	- 21	- 21	- 20
+ 5	- 4	- 3	- 6	- 15	- 21	- 26	- 29	- 29	- 26
0	- 7	- 7	- 13	- 22	- 29	- 34	- 35	- 36	- 30
- 5	- 12	- 13	- 21	- 30	- 37	- 42	- 43	- 43	- 35
-10	- 19	- 22	- 30	- 38	- 45	- 50	- 52	- 50	- 43
-15	- 27	- 34	- 38	- 47	- 55	- 60	- 63	- 61	- 55
-20	- 35	- 43	- 50	- 57	- 65	- 71	- 72	- 71	- 67
-25	- 40	- 50	- 58	- 65	- 74	- 79	- 82	- 82	- 76
-30	- 49	- 58	- 67	- 76	- 83	- 90	- 94	- 93	- 87
-35	- 55	- 65	- 75	- 85	- 93	- 99	-102	-101	- 96
-40	- 65	- 73	- 82	- 94	-102	-108	-111	-109	-101
-45	- 75	- 82	- 92	-103	-109	-114	-116	-118	-116
-50	- 83	- 91	-102	-112	-119	-126	-126	-127	-124
-55	- 98	-111	-120	-119	-129	-132	-137	-134	-125
-60	-120	-126	-132	-138	-142	-143	-143	-142	-130
-65	-138	-144	-150	-155	-156	-154	-152	-148	-143
-70	-160	-164	-167	-165	-162	-162	-160	-158	-148
-75	-176	-177	-176	-176	-169	-170	-167	-164	-152
-80	-176	-176	-177	-174	-175	-172	-167	-161	-141
-85	-165	-166	-168	-166	-163	-158	-154	-150	-142

[a] North latitudes positive, south latitudes negative

Table 51--Continued

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	+ 29	+ 28	+ 26	+ 25	+ 24	+ 24	+ 22	+ 21	+ 20
+80	+ 27	+ 23	+ 20	+ 17	+ 14	+ 12	+ 11	+ 10	+ 9
+75	+ 25	+ 22	+ 19	+ 14	+ 11	+ 7	+ 2	- 3	- 6
+70	+ 27	+ 22	+ 16	+ 10	+ 3	- 3	- 12	- 18	- 21
+65	+ 28	+ 21	+ 14	+ 6	- 2	- 11	- 20	- 26	- 30
+60	+ 24	+ 16	+ 9	+ 2	- 7	- 16	- 26	- 34	- 40
+55	+ 20	+ 13	+ 6	- 2	- 10	- 22	- 31	- 37	- 40
+50	+ 16	+ 6	0	- 7	- 15	- 25	- 34	- 39	- 42
+45	+ 9	+ 2	- 3	- 11	- 19	- 26	- 33	- 38	- 40
+40	+ 6	0	- 6	- 11	- 19	- 25	- 29	- 34	- 36
+35	+ 1	- 3	- 7	- 11	- 16	- 21	- 25	- 28	- 31
+30	- 4	- 5	- 7	- 10	- 13	- 16	- 18	- 21	- 24
+25	- 8	- 8	- 8	- 8	- 8	- 8	- 11	- 13	- 15
+20	- 12	- 10	- 7	- 4	- 2	- 2	- 3	- 4	- 6
+15	- 13	- 10	- 6	- 1	+ 3	+ 5	+ 5	+ 5	+ 3
+10	- 16	- 9	- 2	+ 3	+ 7	+ 11	+ 12	+ 13	+ 11
+ 5	- 20	- 10	- 1	+ 6	+ 10	+ 14	+ 16	+ 17	+ 17
0	- 22	- 14	0	+ 7	+ 12	+ 16	+ 18	+ 20	+ 21
- 5	- 26	- 17	- 4	+ 6	+ 12	+ 16	+ 18	+ 21	+ 24
-10	- 33	- 22	- 8	+ 4	+ 11	+ 14	+ 18	+ 21	+ 24
-15	- 45	- 32	- 16	- 2	+ 5	+ 9	+ 14	+ 19	+ 23
-20	- 57	- 43	- 26	- 12	- 2	+ 4	+ 12	+ 16	+ 21
-25	- 67	- 56	- 40	- 25	- 13	- 2	+ 7	+ 13	+ 19
-30	- 77	- 66	- 52	- 39	- 25	- 13	0	+ 8	+ 16
-35	- 91	- 79	- 65	- 52	- 38	- 22	- 12	+ 2	+ 11
-40	-101	- 87	- 77	- 65	- 51	- 36	- 21	- 6	+ 5
-45	-108	- 95	- 86	- 76	- 62	- 45	- 32	- 16	- 2
-50	-115	-107	- 98	- 87	- 70	- 53	- 40	- 21	- 8
-55	-117	-109	-102	- 96	- 86	- 66	- 47	- 31	- 17
-60	-123	-117	-112	-102	- 91	- 69	- 46	- 30	- 18
-65	-136	-129	-122	-106	- 90	- 62	- 41	- 26	- 16
-70	-137	-127	-115	-100	- 81	- 56	- 44	- 36	- 28
-75	-138	-127	-114	-103	- 90	- 74	- 61	- 49	- 41
-80	-135	-124	-112	-103	- 95	- 87	- 77	- 67	- 52
-85	-133	-123	-113	-102	- 91	- 79	- 67	- 55	- 43

[a] North latitudes positive, south latitudes negative

Table 51--Continued

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	+ 19	+ 19	+ 18	+ 18	+ 17	+ 17	+ 17	+ 16	+ 16
+80	+ 8	+ 8	+ 7	+ 7	+ 8	+ 8	+ 10	+ 12	+ 15
+75	- 7	- 8	- 8	- 8	- 6	- 2	+ 2	+ 6	+ 10
+70	- 21	- 19	- 19	- 17	- 13	- 8	- 3	+ 4	+ 11
+65	- 30	- 30	- 29	- 27	- 20	- 14	- 6	+ 2	+ 11
+60	- 34	- 35	- 33	- 31	- 26	- 17	- 6	+ 3	+ 12
+55	- 41	- 40	- 37	- 32	- 27	- 17	- 8	+ 4	+ 15
+50	- 44	- 43	- 38	- 30	- 24	- 14	- 4	+ 8	+ 18
+45	- 44	- 43	- 35	- 27	- 18	- 9	+ 2	+ 12	+ 25
+40	- 38	- 36	- 32	- 25	- 15	- 5	+ 7	+ 17	+ 28
+35	- 32	- 32	- 26	- 18	- 7	+ 2	+ 13	+ 24	+ 32
+30	- 24	- 22	- 18	- 11	0	+ 9	+ 21	+ 30	+ 39
+25	- 16	- 14	- 10	- 3	+ 6	+ 16	+ 26	+ 35	+ 43
+20	- 6	- 4	0	+ 6	+ 14	+ 22	+ 34	+ 40	+ 46
+15	+ 2	+ 5	+ 7	+ 13	+ 22	+ 29	+ 37	+ 46	+ 50
+10	+ 10	+ 12	+ 15	+ 21	+ 30	+ 37	+ 42	+ 46	+ 52
+ 5	+ 16	+ 19	+ 23	+ 28	+ 34	+ 39	+ 47	+ 53	+ 55
0	+ 22	+ 25	+ 28	+ 32	+ 38	+ 43	+ 51	+ 57	+ 58
- 5	+ 26	+ 28	+ 30	+ 34	+ 40	+ 46	+ 52	+ 57	+ 60
-10	+ 26	+ 29	+ 32	+ 36	+ 43	+ 48	+ 53	+ 57	+ 61
-15	+ 26	+ 31	+ 35	+ 39	+ 45	+ 50	+ 55	+ 60	+ 63
-20	+ 26	+ 31	+ 36	+ 42	+ 47	+ 52	+ 57	+ 64	+ 66
-25	+ 25	+ 31	+ 37	+ 44	+ 49	+ 55	+ 60	+ 66	+ 68
-30	+ 23	+ 30	+ 37	+ 44	+ 50	+ 59	+ 64	+ 68	+ 71
-35	+ 19	+ 29	+ 36	+ 44	+ 50	+ 58	+ 64	+ 69	+ 72
-40	+ 14	+ 25	+ 35	+ 41	+ 49	+ 56	+ 63	+ 70	+ 75
-45	+ 7	+ 19	+ 28	+ 36	+ 46	+ 54	+ 61	+ 68	+ 73
-50	+ 1	+ 12	+ 23	+ 34	+ 43	+ 52	+ 60	+ 71	+ 68
-55	- 7	+ 6	+ 18	+ 32	+ 41	+ 52	+ 64	+ 70	+ 70
-60	- 6	+ 3	+ 15	+ 27	+ 37	+ 48	+ 56	+ 70	+ 74
-65	- 11	- 3	+ 5	+ 15	+ 29	+ 46	+ 58	+ 72	+ 75
-70	- 20	- 15	- 8	+ 5	+ 16	+ 24	+ 42	+ 52	+ 66
-75	- 34	- 26	- 14	+ 3	+ 12	+ 22	+ 22	+ 42	+ 58
-80	- 40	- 25	- 10	+ 3	+ 17	+ 28	+ 40	+ 52	+ 61
-85	- 30	- 19	- 7	+ 5	+ 16	+ 32	+ 48	+ 60	+ 69

[a] North latitudes positive, south latitudes negative

Table 51--Continued

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	+ 16	+ 15	+ 16	+ 15	+ 16	+ 16	+ 16	+ 15	+ 15
+80	+ 16	+ 18	+ 19	+ 21	+ 21	+ 21	+ 21	+ 20	+ 19
+75	+ 16	+ 20	+ 24	+ 28	+ 30	+ 32	+ 33	+ 32	+ 31
+70	+ 18	+ 25	+ 32	+ 37	+ 42	+ 45	+ 48	+ 52	+ 51
+65	+ 19	+ 28	+ 37	+ 44	+ 51	+ 56	+ 61	+ 64	+ 66
+60	+ 21	+ 30	+ 43	+ 50	+ 58	+ 62	+ 68	+ 71	+ 69
+55	+ 28	+ 40	+ 48	+ 56	+ 62	+ 70	+ 72	+ 72	+ 75
+50	+ 29	+ 41	+ 50	+ 58	+ 62	+ 65	+ 69	+ 80	+ 82
+45	+ 36	+ 42	+ 52	+ 61	+ 68	+ 70	+ 74	+ 79	+ 79
+40	+ 40	+ 49	+ 54	+ 61	+ 66	+ 71	+ 74	+ 78	+ 80
+35	+ 42	+ 48	+ 53	+ 59	+ 64	+ 67	+ 70	+ 73	+ 76
+30	+ 46	+ 51	+ 54	+ 58	+ 61	+ 63	+ 66	+ 69	+ 69
+25	+ 49	+ 52	+ 55	+ 57	+ 58	+ 59	+ 62	+ 63	+ 66
+20	+ 50	+ 53	+ 56	+ 54	+ 54	+ 56	+ 59	+ 59	+ 61
+15	+ 52	+ 54	+ 56	+ 54	+ 54	+ 54	+ 55	+ 54	+ 57
+10	+ 54	+ 56	+ 55	+ 55	+ 52	+ 50	+ 49	+ 51	+ 54
+ 5	+ 56	+ 55	+ 54	+ 52	+ 51	+ 51	+ 51	+ 53	+ 55
0	+ 58	+ 57	+ 54	+ 54	+ 52	+ 54	+ 54	+ 56	+ 55
- 5	+ 62	+ 62	+ 60	+ 59	+ 56	+ 58	+ 57	+ 56	+ 56
-10	+ 63	+ 65	+ 62	+ 62	+ 61	+ 61	+ 61	+ 59	+ 59
-15	+ 67	+ 68	+ 66	+ 66	+ 64	+ 65	+ 65	+ 65	+ 64
-20	+ 69	+ 71	+ 71	+ 70	+ 69	+ 70	+ 70	+ 70	+ 69
-25	+ 71	+ 73	+ 74	+ 73	+ 75	+ 75	+ 74	+ 76	+ 74
-30	+ 72	+ 76	+ 78	+ 77	+ 79	+ 80	+ 80	+ 80	+ 80
-35	+ 75	+ 78	+ 81	+ 82	+ 84	+ 84	+ 84	+ 83	+ 82
-40	+ 77	+ 81	+ 83	+ 85	+ 86	+ 87	+ 89	+ 89	+ 88
-45	+ 77	+ 81	+ 84	+ 86	+ 88	+ 90	+ 91	+ 93	+ 94
-50	+ 78	+ 85	+ 89	+ 89	+ 94	+ 96	+ 98	+ 99	+101
-55	+ 79	+ 82	+ 87	+ 87	+ 92	+ 98	+ 96	+102	+108
-60	+ 78	+ 84	+ 89	+ 94	+ 95	+ 95	+100	+105	+109
-65	+ 76	+ 76	+ 80	+ 85	+ 90	+ 94	+ 99	+102	+107
-70	+ 71	+ 78	+ 80	+ 84	+ 90	+ 95	+101	+109	+114
-75	+ 68	+ 75	+ 81	+ 86	+ 94	+100	+105	+113	+118
-80	+ 73	+ 80	+ 90	+ 98	+103	+108	+114	+125	+124
-85	+ 81	+ 91	+100	+109	+114	+120	+126	+131	+136

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[a] North latitudes positive, south latitudes negative

Table 51--Continued

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	+ 14	+ 14	+ 11	+ 8	+ 3	- 2	- 7	- 11	- 16
+80	+ 16	+ 15	+ 13	+ 10	+ 7	+ 5	+ 1	- 6	- 11
+75	+ 30	+ 27	+ 24	+ 21	+ 16	+ 10	+ 5	- 2	- 7
+70	+ 49	+ 44	+ 40	+ 34	+ 26	+ 19	+ 10	+ 2	- 4
+65	+ 62	+ 60	+ 56	+ 50	+ 41	+ 32	+ 18	+ 8	- 1
+60	+ 66	+ 69	+ 66	+ 59	+ 50	+ 37	+ 27	+ 15	+ 4
+55	+ 78	+ 76	+ 71	+ 65	+ 58	+ 48	+ 35	+ 22	+ 8
+50	+ 82	+ 80	+ 78	+ 71	+ 64	+ 52	+ 41	+ 28	+ 14
+45	+ 81	+ 80	+ 80	+ 73	+ 66	+ 55	+ 46	+ 34	+ 24
+40	+ 78	+ 79	+ 77	+ 73	+ 68	+ 60	+ 52	+ 42	+ 28
+35	+ 77	+ 77	+ 75	+ 71	+ 67	+ 60	+ 56	+ 45	+ 34
+30	+ 72	+ 70	+ 70	+ 69	+ 59	+ 62	+ 57	+ 48	+ 38
+25	+ 66	+ 66	+ 67	+ 66	+ 60	+ 62	+ 58	+ 50	+ 44
+20	+ 62	+ 62	+ 62	+ 62	+ 60	+ 58	+ 55	+ 51	+ 47
+15	+ 58	+ 58	+ 59	+ 60	+ 58	+ 58	+ 54	+ 53	+ 51
+10	+ 56	+ 56	+ 56	+ 56	+ 56	+ 58	+ 57	+ 56	+ 52
+ 5	+ 55	+ 54	+ 53	+ 54	+ 56	+ 57	+ 59	+ 59	+ 55
0	+ 52	+ 49	+ 51	+ 53	+ 55	+ 58	+ 61	+ 60	+ 57
- 5	+ 53	+ 53	+ 54	+ 55	+ 56	+ 59	+ 60	+ 60	+ 59
-10	+ 58	+ 58	+ 58	+ 58	+ 58	+ 59	+ 61	+ 61	+ 61
-15	+ 63	+ 63	+ 62	+ 61	+ 61	+ 62	+ 62	+ 64	+ 63
-20	+ 69	+ 69	+ 67	+ 65	+ 64	+ 67	+ 67	+ 67	+ 67
-25	+ 74	+ 74	+ 72	+ 71	+ 72	+ 71	+ 72	+ 72	+ 72
-30	+ 79	+ 80	+ 77	+ 77	+ 78	+ 79	+ 81	+ 80	+ 78
-35	+ 84	+ 83	+ 83	+ 84	+ 84	+ 86	+ 89	+ 87	+ 86
-40	+ 88	+ 89	+ 88	+ 91	+ 91	+ 92	+ 95	+ 96	+ 95
-45	+ 95	+ 96	+ 96	+ 98	+ 99	+103	+104	+105	+102
-50	+103	+104	+106	+106	+106	+108	+111	+113	+115
-55	+110	+112	+114	+115	+118	+121	+119	+121	+121
-60	+111	+114	+120	+124	+127	+128	+129	+128	+125
-65	+112	+115	+119	+124	+129	+133	+136	+136	+132
-70	+122	+126	+131	+138	+144	+148	+151	+150	+146
-75	+123	+128	+131	+142	+146	+151	+158	+156	+151
-80	+126	+142	+147	+151	+155	+153	+153	+152	+146
-85	+141	+146	+149	+150	+151	+149	+147	+144	+139

[a] North latitudes positive, south latitudes negative

Table 51--Continued

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	- 20	- 23	- 26	- 29	- 31	- 33	- 33	- 35	- 35
+80	- 16	- 21	- 26	- 30	- 35	- 40	- 44	- 46	- 48
+75	- 15	- 26	- 34	- 39	- 47	- 50	- 53	- 54	- 55
+70	- 14	- 23	- 32	- 40	- 47	- 53	- 65	- 68	- 61
+65	- 11	- 24	- 35	- 43	- 50	- 58	- 61	- 67	- 70
+60	- 13	- 24	- 36	- 45	- 53	- 59	- 65	- 71	- 74
+55	- 5	- 19	- 30	- 42	- 56	- 71	- 70	- 76	- 79
+50	+ 1	- 15	- 28	- 41	- 52	- 65	- 69	- 74	- 78
+45	+ 8	- 5	- 24	- 37	- 49	- 61	- 69	- 77	- 78
+40	+ 13	+ 2	- 18	- 30	- 45	- 57	- 66	- 74	- 80
+35	+ 21	+ 5	- 8	- 25	- 39	- 52	- 64	- 74	- 78
+30	+ 28	+ 14	0	- 15	- 33	- 48	- 61	- 72	- 79
+25	+ 35	+ 23	+ 9	- 9	- 26	- 43	- 58	- 69	- 78
+20	+ 38	+ 27	+ 13	- 1	- 17	- 38	- 52	- 65	- 75
+15	+ 44	+ 33	+ 22	+ 6	- 10	- 31	- 48	- 61	- 74
+10	+ 47	+ 38	+ 28	+ 11	- 5	- 24	- 42	- 58	- 70
+ 5	+ 50	+ 43	+ 30	+ 17	0	- 19	- 37	- 54	- 67
0	+ 52	+ 45	+ 35	+ 21	+ 5	- 12	- 32	- 49	- 65
- 5	+ 57	+ 49	+ 39	+ 25	+ 9	- 8	- 26	- 45	- 60
-10	+ 60	+ 52	+ 43	+ 30	+ 13	- 2	- 20	- 40	- 56
-15	+ 60	+ 55	+ 46	+ 35	+ 20	+ 2	- 14	- 33	- 49
-20	+ 65	+ 59	+ 51	+ 40	+ 27	+ 8	- 9	- 25	- 43
-25	+ 70	+ 66	+ 57	+ 45	+ 32	+ 15	- 2	- 20	- 37
-30	+ 75	+ 74	+ 65	+ 51	+ 37	+ 22	+ 4	- 14	- 30
-35	+ 84	+ 80	+ 71	+ 58	+ 41	+ 30	+ 12	- 5	- 21
-40	+ 91	+ 86	+ 76	+ 68	+ 52	+ 38	+ 19	+ 2	- 13
-45	+ 99	+ 95	+ 85	+ 74	+ 59	+ 45	+ 26	+ 8	- 8
-50	+107	+101	+ 90	+ 81	+ 68	+ 52	+ 35	+ 19	+ 3
-55	+116	+108	+ 98	+ 86	+ 73	+ 59	+ 43	+ 28	+ 12
-60	+119	+112	+103	+ 92	+ 80	+ 67	+ 53	+ 38	+ 22
-65	+126	+119	+108	+ 98	+ 87	+ 75	+ 67	+ 48	+ 32
-70	+135	+124	+112	+106	+ 94	+ 86	+ 78	+ 59	+ 44
-75	+139	+127	+116	+105	+ 94	+ 84	+ 76	+ 65	+ 52
-80	+138	+128	+119	+106	+ 97	+ 84	+ 75	+ 63	+ 52
-85	+133	+125	+117	+108	+100	+ 90	+ 78	+ 65	+ 52

[a] North latitudes positive, south latitudes negative

Table 51--Concluded

Values of east component (Y) of magnetic field intensity for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	- 35	- 35	- 34	- 32	- 29	- 27	- 25	- 24	- 22
+80	- 48	- 46	- 44	- 43	- 40	- 37	- 31	- 23	- 20
+75	- 55	- 55	- 54	- 53	- 49	- 44	- 34	- 21	- 19
+70	- 62	- 63	- 64	- 63	- 58	- 51	- 45	- 38	- 32
+65	- 68	- 68	- 68	- 65	- 60	- 53	- 46	- 41	- 34
+60	- 75	- 74	- 71	- 67	- 64	- 58	- 50	- 43	- 37
+55	- 79	- 78	- 75	- 72	- 65	- 58	- 52	- 46	- 38
+50	- 80	- 81	- 79	- 74	- 66	- 60	- 53	- 46	- 39
+45	- 81	- 82	- 80	- 76	- 70	- 61	- 58	- 44	- 38
+40	- 83	- 85	- 82	- 76	- 72	- 66	- 59	- 51	- 43
+35	- 85	- 85	- 86	- 80	- 76	- 70	- 60	- 55	- 47
+30	- 85	- 88	- 86	- 86	- 82	- 75	- 70	- 60	- 48
+25	- 85	- 90	- 92	- 94	- 88	- 80	- 74	- 63	- 53
+20	- 85	- 93	- 95	- 99	- 95	- 88	- 78	- 68	- 58
+15	- 83	- 94	- 99	-101	-101	- 96	- 87	- 76	- 65
+10	- 84	- 94	-102	-107	-107	-101	- 93	- 83	- 71
+ 5	- 81	- 93	-102	-107	-109	-107	- 99	- 89	- 77
0	- 78	- 89	- 99	-106	-108	-107	-102	- 93	- 83
- 5	- 74	- 86	- 95	-101	-105	-105	-101	- 93	- 85
-10	- 71	- 81	- 90	- 96	-101	-102	- 99	- 93	- 88
-15	- 64	- 75	- 85	- 91	- 98	- 97	- 96	- 91	- 87
-20	- 58	- 70	- 77	- 84	- 90	- 91	- 92	- 89	- 84
-25	- 50	- 62	- 70	- 77	- 83	- 86	- 88	- 86	- 82
-30	- 42	- 54	- 63	- 70	- 76	- 80	- 83	- 83	- 82
-35	- 36	- 47	- 56	- 65	- 70	- 74	- 76	- 78	- 78
-40	- 27	- 40	- 49	- 58	- 65	- 69	- 73	- 78	- 77
-45	- 21	- 34	- 44	- 54	- 59	- 66	- 72	- 73	- 74
-50	- 11	- 24	- 35	- 45	- 53	- 60	- 65	- 70	- 73
-55	- 2	- 15	- 27	- 37	- 48	- 56	- 60	- 65	- 67
-60	+ 8	- 4	- 15	- 25	- 37	- 47	- 54	- 62	- 66
-65	+ 18	+ 6	- 7	- 17	- 28	- 40	- 52	- 62	- 68
-70	+ 29	+ 16	+ 3	- 10	- 23	- 34	- 49	- 64	- 73
-75	+ 38	+ 26	+ 11	- 4	- 18	- 32	- 49	- 65	- 81
-80	+ 38	+ 28	+ 14	- 3	- 19	- 32	- 49	- 66	- 80
-85	+ 38	+ 23	+ 9	- 6	- 21	- 36	- 50	- 65	- 78

[a] North latitudes positive, south latitudes negative

Table 52

Values of inclination (I) of magnetic field intensity for 1945 expressed in degrees for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	+84.6	+84.7	+84.7	+84.7	+84.7	+84.9	+84.9	+85.0	+85.1
+80	+82.2	+82.2	+82.3	+82.4	+82.5	+82.6	+82.8	+82.9	+83.0
+75	+79.9	+79.8	+79.8	+79.9	+80.1	+80.4	+80.5	+80.6	+80.8
+70	+77.6	+77.5	+77.6	+77.6	+77.7	+77.9	+78.2	+78.4	+78.5
+65	+75.4	+75.2	+75.4	+75.6	+75.6	+75.6	+75.7	+75.7	+76.0
+60	+72.9	+72.5	+72.5	+72.5	+72.6	+72.6	+72.6	+73.1	+73.2
+55	+69.7	+69.5	+69.1	+69.1	+69.2	+69.4	+69.5	+69.5	+69.7
+50	+65.8	+65.6	+65.3	+65.2	+65.3	+65.5	+65.7	+65.5	+65.8
+45	+61.8	+61.2	+61.0	+60.8	+61.0	+61.3	+61.7	+61.4	+61.6
+40	+56.3	+55.9	+55.5	+55.5	+55.5	+55.4	+55.7	+56.1	+56.8
+35	+49.8	+49.6	+49.3	+49.4	+49.3	+49.3	+49.5	+49.7	+50.9
+30	+43.0	+42.1	+41.9	+41.9	+42.1	+42.3	+42.5	+43.2	+43.7
+25	+33.9	+33.5	+32.6	+32.5	+33.0	+33.3	+33.6	+34.1	+35.0
+20	+24.7	+23.8	+23.6	+22.5	+22.4	+22.7	+23.4	+24.3	+25.2
+15	+13.0	+11.9	+10.8	+11.3	+11.7	+11.7	+12.0	+12.9	+13.5
+10	+ 1.4	0.0	- 0.4	- 0.6	- 0.5	- 0.4	- 0.3	- 0.3	+ 1.6
+ 5	-10.4	-12.0	-12.8	-13.4	-13.2	-12.8	-12.5	-11.6	-10.5
0	-21.6	-23.5	-24.2	-24.6	-25.3	-24.9	-24.2	-23.8	-22.4
- 5	-31.2	-33.3	-34.5	-34.5	-35.2	-35.3	-35.3	-34.5	-33.6
-10	-38.2	-40.6	-42.1	-44.4	-44.5	-44.4	-44.1	-43.8	-42.8
-15	-44.7	-47.2	-49.2	-49.9	-50.7	-51.2	-51.3	-51.0	-51.0
-20	-49.4	-51.8	-53.7	-55.1	-56.6	-57.4	-57.3	-57.1	-56.9
-25	-53.2	-55.5	-57.5	-58.9	-60.2	-61.4	-61.9	-61.9	-60.9
-30	-55.8	-58.2	-60.3	-61.3	-62.8	-63.6	-64.8	-65.1	-63.5
-35	-57.8	-60.0	-61.8	-63.1	-64.5	-65.6	-66.1	-65.5	-65.6
-40	-58.8	-60.8	-62.5	-63.8	-64.9	-65.7	-66.3	-66.4	-66.6
-45	-59.7	-61.3	-63.1	-64.4	-65.5	-66.0	-66.5	-66.5	-66.6
-50	-60.0	-61.6	-63.1	-64.2	-65.1	-65.5	-65.8	-65.9	-65.8
-55	-60.4	-61.9	-63.4	-64.1	-65.2	-65.7	-66.1	-66.1	-66.2
-60	-62.3	-63.6	-64.5	-65.4	-66.2	-66.8	-67.2	-67.2	-67.1
-65	-64.5	-65.6	-66.4	-66.9	-67.3	-67.6	-67.6	-67.6	-67.6
-70	-66.9	-67.5	-67.9	-68.1	-68.1	-67.9	-67.9	-67.6	-67.7
-75	-68.2	-68.4	-68.5	-68.3	-68.3	-68.2	-68.2	-68.1	-68.6
-80	-69.9	-69.8	-70.0	-70.0	-70.1	-70.2	-70.4	-70.7	-71.0
-85	-72.9	-72.9	-72.9	-73.0	-73.2	-73.2	-73.3	-73.5	-73.7

[a] North latitudes positive, south latitudes negative

Table 52--Continued

Values of inclination (I) of magnetic field intensity for 1945 expressed in degrees for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	+85.2	+85.3	+85.5	+85.6	+85.7	+85.9	+86.1	+86.3	+86.5
+80	+83.2	+83.4	+83.7	+84.0	+84.4	+84.6	+85.0	+85.4	+85.9
+75	+81.0	+81.2	+81.6	+82.1	+82.5	+82.9	+83.3	+83.7	+84.5
+70	+78.8	+79.3	+79.8	+80.1	+80.5	+80.9	+81.5	+82.1	+82.5
+65	+76.5	+76.8	+77.2	+77.5	+77.8	+78.3	+78.9	+79.4	+79.9
+60	+73.6	+73.8	+74.4	+74.9	+75.0	+75.4	+75.9	+76.4	+77.1
+55	+70.1	+70.7	+71.0	+71.3	+71.8	+72.1	+72.5	+72.8	+73.4
+50	+66.3	+66.7	+67.4	+68.1	+68.2	+68.4	+68.7	+68.9	+68.7
+45	+62.2	+62.5	+63.1	+63.5	+64.0	+64.3	+64.7	+64.4	+64.4
+40	+57.9	+57.9	+58.2	+58.4	+58.8	+59.1	+59.1	+58.9	+58.4
+35	+51.1	+51.8	+52.1	+52.5	+52.6	+52.7	+52.7	+52.2	+52.0
+30	+44.3	+44.5	+45.3	+45.6	+45.9	+45.6	+45.3	+45.2	+44.8
+25	+35.8	+36.4	+37.4	+37.6	+37.5	+37.7	+37.7	+36.7	+35.9
+20	+25.7	+26.3	+26.4	+26.7	+27.2	+28.2	+27.5	+25.6	+25.3
+15	+14.4	+15.4	+16.3	+16.9	+17.2	+17.1	+16.3	+15.1	+14.1
+10	+ 2.4	+ 3.6	+ 5.0	+ 5.6	+ 6.0	+ 5.0	+ 4.2	+ 2.8	+ 2.0
+ 5	- 9.3	- 8.2	- 7.3	- 6.5	- 6.2	- 6.8	- 8.0	- 9.1	-10.4
0	-20.9	-20.0	-19.0	-18.1	-17.9	-17.5	-19.7	-20.8	-21.4
- 5	-32.2	-30.8	-29.9	-29.3	-28.4	-26.9	-30.0	-32.9	-32.9
-10	-41.5	-40.4	-39.8	-39.4	-38.9	-37.4	-39.4	-41.6	-41.9
-15	-49.6	-48.4	-48.0	-47.2	-46.9	-46.1	-47.6	-48.9	-49.3
-20	-56.2	-55.6	-53.9	-53.5	-53.7	-53.6	-54.3	-54.9	-55.5
-25	-60.2	-5917	-59.3	-58.6	-58.5	-58.7	-59.2	-60.0	-60.8
-30	-62.8	-62.0	-61.3	-61.1	-61.3	-61.7	-62.4	-63.8	-64.5
-35	-64.7	-64.2	-63.6	-63.0	-63.3	-63.9	-65.0	-66.2	-67.2
-40	-66.4	-65.7	-65.1	-64.7	-64.9	-65.6	-66.7	-67.8	-69.2
-45	-66.4	-65.9	-65.7	-65.4	-65.9	-66.7	-67.7	-68.9	-70.4
-50	-65.7	-65.4	-65.2	-65.4	-66.1	-66.9	-68.4	-69.6	-71.1
-55	-65.9	-65.4	-65.2	-65.9	-66.9	-68.1	-69.1	-70.5	-72.1
-60	-66.7	-66.6	-67.0	-67.5	-68.1	-69.2	-70.2	-71.4	-73.4
-65	-67.7	-68.1	-68.5	-68.6	-69.4	-70.4	-71.4	-72.5	-73.9
-70	-68.0	-68.4	-68.8	-69.9	-70.9	-71.7	-72.5	-73.4	-74.9
-75	-68.9	-69.6	-70.4	-71.3	-72.1	-72.8	-73.6	-74.5	-75.7
-80	-71.5	-71.9	-72.4	-73.0	-73.4	-73.8	-74.4	-75.0	-76.0
-85	-73.9	-74.0	-74.1	-74.3	-74.7	-74.8	-75.0	-75.1	-75.4

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[a] North latitudes positive, south latitudes negative

Table 52--Continued

Values of inclination (I) of magnetic field intensity for 1945 expressed in degrees for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	+86.7	+86.9	+87.1	+87.2	+87.2	+87.2	+87.3	+87.4	+87.5
+80	+86.2	+86.5	+86.7	+86.9	+87.0	+87.1	+87.0	+86.9	+86.8
+75	+84.9	+85.2	+85.2	+85.6	+85.4	+85.3	+85.2	+84.9	+84.6
+70	+82.8	+83.1	+83.2	+83.4	+83.5	+83.4	+83.1	+82.6	+82.0
+65	+80.4	+80.7	+80.9	+80.8	+80.9	+90.7	+80.4	+79.7	+78.7
+60	+77.3	+77.6	+77.7	+77.6	+77.5	+76.8	+76.1	+75.9	+74.4
+55	+73.4	+73.7	+73.8	+74.1	+73.9	+73.4	+72.4	+71.5	+70.6
+50	+69.4	+69.2	+69.2	+69.0	+68.7	+68.3	+68.0	+67.6	+66.0
+45	+64.5	+64.6	+64.5	+64.2	+63.8	+63.7	+62.9	+62.0	+61.5
+40	+58.4	+58.4	+58.4	+58.3	+57.8	+57.7	+57.3	+56.5	+55.8
+35	+52.0	+51.9	+51.8	+51.7	+51.4	+51.0	+50.9	+50.4	+49.8
+30	+44.3	+44.1	+44.0	+43.8	+43.8	+43.8	+43.8	+43.3	+42.7
+25	+35.5	+35.3	+35.2	+34.9	+35.0	+35.1	+35.4	+35.3	+35.1
+20	+25.0	+25.0	+24.8	+24.8	+25.1	+26.0	+26.4	+26.2	+26.3
+15	+13.9	+13.4	+13.4	+13.6	+14.0	+15.3	+16.3	+16.0	+17.1
+10	+ 2.3	+ 1.4	+ 1.4	+ 2.7	+ 3.3	+ 4.4	+ 4.9	+ 5.5	+ 6.1
+ 5	-11.0	-10.5	-10.0	- 9.2	- 7.7	- 7.0	- 6.3	- 5.8	- 5.2
0	-21.6	-22.4	-21.5	-20.8	-19.7	-18.3	-16.9	-16.0	-15.4
- 5	-32.5	-32.9	-32.0	-31.1	-29.2	-28.5	-27.6	-26.5	-25.6
-10	-41.8	-41.8	-41.1	-39.8	-38.7	-38.0	-37.0	-35.5	-34.6
-15	-49.9	-49.6	-48.9	-48.2	-47.2	-46.2	-45.3	-44.0	-43.2
-20	-56.0	-55.8	-55.4	-54.9	-54.0	-52.9	-51.9	-51.1	-50.4
-25	-61.1	-61.4	-61.4	-60.9	-60.0	-59.1	-58.1	-57.7	-57.2
-30	-65.3	-65.9	-66.0	-65.8	-65.1	-64.1	-63.6	-63.0	-62.6
-35	-68.2	-69.0	-69.5	-69.6	-69.5	-69.1	-68.4	-67.9	-67.5
-40	-70.4	-71.2	-72.3	-72.8	-73.0	-72.8	-72.4	-72.2	-71.6
-45	-71.8	-73.1	-74.1	-75.2	-75.6	-75.9	-75.1	-75.9	-75.5
-50	-72.5	-73.9	-75.3	-76.7	-78.0	-78.6	-79.0	-79.2	-78.9
-55	-73.7	-75.4	-76.7	-77.8	-79.1	-80.4	-81.2	-81.6	-81.7
-60	-74.8	-76.1	-77.4	-78.7	-79.8	-81.6	-83.3	-84.2	-84.7
-65	-75.1	-76.7	-78.3	-79.6	-81.2	-83.7	-85.6	-86.7	-87.3
-70	-76.6	-78.1	-79.4	-81.0	-82.7	-85.0	-86.1	-86.9	-87.7
-75	-77.1	-78.3	-79.5	-80.6	-81.7	-83.1	-84.3	-85.3	-86.0
-80	-77.0	-77.6	-78.3	-78.7	-79.2	-79.6	-80.0	-80.4	-80.9
-85	-75.7	-76.0	-76.2	-76.5	-76.8	-77.1	-77.3	-77.4	-77.6

[a] North latitudes positive, south latitudes negative

Table 52--Continued

Values of inclination (I) of magnetic field intensity for 1945 expressed in degrees for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	+87.6	+87.6	+87.6	+87.7	+87.8	+87.8	+87.9	+88.0	+88.1
+70	+86.6	+86.4	+86.3	+86.3	+86.2	+86.2	+86.2	+86.2	+86.2
+75	+84.4	+84.0	+83.6	+83.5	+83.3	+82.8	+82.8	+82.7	+82.7
+70	+81.4	+80.8	+80.2	+79.8	+79.5	+79.1	+78.8	+78.6	+78.6
+65	+77.8	+77.0	+76.1	+75.6	+75.3	+74.6	+74.4	+74.2	+74.3
+60	+74.0	+73.0	+72.3	+71.8	+71.2	+70.4	+70.0	+69.9	+69.5
+55	+70.0	+69.4	+68.7	+68.0	+67.0	+66.3	+66.3	+65.9	+65.9
+50	+65.2	+64.3	+63.6	+62.8	+62.0	+61.8	+61.3	+61.1	+61.3
+45	+60.5	+59.5	+58.4	+57.4	+57.0	+56.9	+56.9	+56.8	+57.0
+40	+54.8	+54.1	+53.3	+52.3	+51.8	+51.6	+51.5	+52.0	+52.6
+35	+48.8	+47.9	+47.1	+46.8	+46.4	+46.2	+46.2	+46.8	+47.5
+30	+41.9	+41.6	+40.8	+40.5	+40.0	+40.1	+40.5	+41.0	+41.7
+25	+34.3	+34.0	+33.2	+33.1	+33.4	+33.7	+34.0	+34.8	+36.1
+20	+26.0	+25.6	+25.1	+25.0	+25.3	+25.8	+26.0	+28.1	+29.2
+15	+16.6	+16.9	+16.5	+16.6	+16.9	+17.7	+18.6	+20.3	+21.5
+10	+ 6.4	+ 6.4	+ 7.2	+ 7.5	+ 7.6	+ 8.6	+ 9.4	+11.9	+13.3
+ 5	- 4.0	- 3.6	- 3.6	- 2.9	- 1.9	- 0.5	- 0.2	+ 1.7	+ 3.9
0	-15.0	-15.0	-14.6	-13.4	-12.0	-11.2	- 9.8	- 7.2	- 6.6
- 5	-25.1	-24.6	-23.9	-23.1	-22.1	-20.9	-20.0	-18.4	-16.7
-10	-34.1	-33.6	-32.8	-32.3	-31.3	-30.4	-28.9	-27.8	-26.6
-15	-42.4	-41.7	-41.3	-40.6	-39.7	-38.9	-38.1	-36.6	-35.9
-20	-49.7	-49.1	-48.4	-47.8	-46.9	-46.3	-45.6	-44.9	-43.7
-25	-56.4	-55.7	-55.0	-54.4	-53.8	-53.0	-52.2	-51.1	-50.0
-30	-61.9	-61.1	-60.6	-60.1	-59.5	-58.4	-57.6	-57.0	-56.1
-35	-66.8	-66.3	-65.5	-65.0	-64.4	-63.2	-62.3	-61.6	-61.0
-40	-71.2	-70.6	-69.9	-69.4	-68.7	-67.8	-66.8	-66.0	-65.0
-45	-74.9	-74.4	-74.0	-73.6	-72.7	-71.8	-70.9	-70.0	-69.4
-50	-78.4	-78.1	-77.6	-77.2	-76.3	-75.3	-74.6	-73.7	-72.7
-55	-81.6	-81.3	-80.9	-80.2	-79.5	-78.8	-77.9	-77.2	-76.3
-60	-84.9	-84.8	-84.5	-84.0	-83.2	-82.4	-81.4	-80.3	-79.6
-65	-87.8	-88.0	-88.0	-87.6	-86.7	-85.5	-84.5	-83.2	-82.5
-70	-88.2	-88.8	-89.2	-89.2	-88.4	-87.7	-86.5	-85.5	-84.3
-75	-86.4	-86.7	-86.8	-86.8	-86.9	-86.8	-86.6	-86.0	-84.9
-80	-81.2	-81.7	-81.8	-81.9	-82.0	-82.1	-82.0	-82.0	-82.0
-85	-77.8	-77.9	-77.9	-78.0	-78.0	-77.9	-78.0	-78.0	-77.9

[a] North latitudes positive, south latitudes negative

Table 52--Continued

Values of inclination (I) of magnetic field intensity for 1945
expressed in degrees for 5-degree intervals of
geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	+88.1	+88.2	+88.2	+88.3	+88.3	+88.3	+88.4	+88.5	+88.5
+80	+86.3	+86.4	+86.5	+86.6	+86.8	+87.1	+87.3	+87.6	+87.8
+75	+82.7	+82.9	+83.1	+83.3	+83.7	+84.2	+84.7	+85.2	+85.7
+70	+78.4	+78.5	+78.7	+78.9	+79.3	+79.8	+80.4	+81.0	+82.1
+65	+74.3	+74.4	+74.6	+75.1	+75.7	+76.2	+77.0	+77.7	+78.4
+60	+70.0	+70.4	+70.8	+71.4	+72.1	+72.6	+73.5	+74.3	+75.4
+55	+66.1	+66.5	+66.7	+67.6	+68.1	+68.8	+69.6	+70.7	+71.9
+50	+61.5	+62.1	+62.7	+63.3	+64.4	+65.7	+66.7	+67.3	+68.0
+45	+57.2	+57.7	+58.6	+59.6	+60.4	+61.3	+62.2	+63.2	+64.2
+40	+53.4	+54.1	+54.8	+55.6	+56.6	+57.6	+58.3	+59.3	+60.3
+35	+48.5	+49.3	+50.3	+51.4	+52.5	+53.6	+54.5	+55.2	+56.4
+30	+43.0	+44.1	+45.3	+46.4	+47.6	+49.1	+50.0	+50.8	+51.6
+25	+37.4	+38.9	+40.3	+41.2	+42.6	+43.5	+44.4	+44.9	+45.8
+20	+30.6	+32.1	+33.6	+34.9	+36.4	+37.7	+37.8	+38.1	+39.3
+15	+22.8	+24.1	+25.6	+27.1	+28.9	+30.3	+30.9	+31.3	+32.0
+10	+15.1	+15.5	+16.7	+18.4	+20.2	+21.5	+22.5	+22.7	+23.2
+ 5	+ 4.9	+ 6.6	+ 8.0	+ 9.4	+11.0	+11.4	+12.5	+13.4	+14.2
0	- 5.2	- 3.7	- 2.1	- 1.1	+ 0.3	+ 1.4	+ 2.3	+ 3.1	+ 3.7
- 5	-15.2	-14.0	-12.6	-11.3	-10.3	- 9.2	- 8.0	- 7.2	- 6.5
-10	-25.3	-23.9	-22.9	-21.3	-19.7	-19.1	-18.4	-17.2	-16.4
-15	-34.7	-33.0	-32.4	-30.6	-29.4	-28.5	-27.4	-26.7	-25.3
-20	-42.2	-40.8	-40.1	-39.1	-37.4	-36.6	-35.4	-34.2	-33.4
-25	-48.9	-48.1	-47.1	-45.9	-45.1	-43.9	-42.9	-41.4	-40.6
-30	-54.9	-54.1	-53.1	-52.0	-51.0	-50.2	-48.7	-47.5	-46.4
-35	-60.1	-59.2	-58.1	-57.0	-56.0	-55.1	-54.2	-53.0	-52.0
-40	-64.1	-63.2	-62.4	-60.9	-60.0	-59.3	-58.4	-57.3	-56.7
-45	-68.3	-67.5	-66.5	-65.7	-64.3	-63.3	-62.5	-61.7	-60.8
-50	-71.7	-70.8	-69.9	-69.2	-68.2	-67.3	-66.2	-65.1	-64.1
-55	-75.1	-74.1	-73.4	-72.6	-71.8	-70.8	-70.2	-69.0	-67.7
-60	-78.8	-77.7	-76.8	-75.7	-75.0	-74.3	-73.6	-72.6	-71.6
-65	-81.8	-81.2	-80.4	-79.5	-78.4	-77.5	-76.6	-75.6	-74.7
-70	-83.5	-82.8	-82.2	-81.5	-80.7	-79.9	-79.0	-77.9	-77.0
-75	-84.2	-83.5	-82.9	-82.3	-81.5	-80.9	-80.3	-79.5	-78.6
-80	-81.8	-81.5	-81.1	-80.6	-80.5	-80.2	-79.4	-78.7	-78.3
-85	-77.9	-77.7	-77.7	-77.6	-77.5	-77.4	-77.2	-77.0	-76.8

[a] North latitudes positive, south latitudes negative

Table 52--Continued

Values of inclination (I) for magnetic field intensity for 1945 expressed in degrees for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	+88.5	+88.4	+88.4	+88.3	+88.3	+88.2	+88.0	+87.9	+87.7
+80	+88.2	+88.4	+88.7	+89.0	+89.2	+89.2	+89.1	+88.8	+88.5
+75	+86.3	+86.9	+87.4	+87.9	+88.4	+89.0	+89.5	+89.6	+89.0
+70	+82.9	+84.1	+85.0	+85.9	+86.7	+87.6	+88.3	+88.7	+88.7
+65	+79.5	+80.4	+81.6	+82.9	+84.1	+85.0	+86.1	+86.9	+87.1
+60	+76.7	+77.4	+78.4	+79.7	+80.9	+82.2	+83.1	+84.0	+84.6
+55	+72.8	+74.0	+75.4	+76.6	+77.7	+79.0	+80.1	+80.8	+82.0
+50	+69.0	+70.4	+71.6	+72.9	+74.0	+75.3	+76.4	+77.4	+78.5
+45	+65.7	+66.9	+68.3	+68.9	+70.3	+71.0	+72.4	+73.7	+74.7
+40	+61.7	+62.5	+63.8	+64.5	+66.0	+67.1	+68.1	+69.2	+70.5
+35	+56.8	+57.9	+59.2	+60.0	+61.5	+63.0	+63.3	+64.8	+65.9
+30	+52.1	+53.0	+54.1	+55.1	+56.7	+57.0	+58.1	+59.5	+61.2
+25	+46.7	+47.7	+48.7	+49.3	+50.7	+51.5	+53.5	+53.9	+55.4
+20	+40.0	+40.9	+42.0	+42.8	+44.0	+45.3	+46.2	+48.0	+49.1
+15	+32.8	+33.3	+34.1	+34.9	+36.1	+37.8	+39.6	+41.3	+42.2
+10	+23.7	+24.6	+25.5	+26.4	+27.8	+28.8	+30.6	+32.5	+34.3
+ 5	+14.7	+15.2	+16.1	+17.2	+18.3	+19.5	+21.1	+23.4	+26.1
0	+ 4.2	+ 5.0	+ 6.2	+ 7.5	+ 8.5	+ 9.5	+10.7	+13.0	+16.6
- 5	- 5.9	- 5.1	- 4.0	- 2.9	- 1.4	- 1.9	+ 1.8	+ 4.0	+ 6.7
-10	-15.8	-14.3	-13.0	-11.9	-11.5	-10.9	- 9.0	- 6.2	- 3.2
-15	-24.3	-22.8	-21.9	-21.2	-20.6	-18.8	-17.5	-15.6	-13.0
-20	-32.1	-31.1	-30.0	-29.4	-28.9	-27.9	-26.1	-24.1	-22.1
-25	-39.0	-38.0	-37.4	-36.4	-35.5	-35.2	-33.5	-31.8	-30.2
-30	-45.7	-44.4	-43.6	-43.0	-42.0	-41.2	-39.9	-38.5	-37.4
-35	-51.2	-50.1	-49.4	-48.5	-47.6	-46.9	-45.4	-44.6	-42.9
-40	-55.7	-54.9	-54.1	-53.1	-52.2	-50.8	-50.3	-49.0	-47.2
-45	-59.5	-58.6	-58.0	-57.4	-56.5	-55.2	-54.2	-52.7	-50.7
-50	-63.1	-62.3	-61.5	-60.9	-60.0	-58.9	-57.6	-55.4	-54.3
-55	-66.9	-66.1	-65.4	-64.6	-63.5	-62.1	-60.9	-59.4	-57.6
-60	-70.8	-70.0	-68.9	-68.0	-66.8	-65.4	-63.9	-62.4	-60.9
-65	-73.6	-72.7	-71.6	-70.5	-69.1	-67.8	-66.4	-65.0	-63.6
-70	-75.9	-75.0	-74.0	-72.5	-71.2	-70.0	-68.8	-67.7	-66.7
-75	-77.9	-77.0	-76.0	-74.9	-73.9	-72.8	-71.5	-70.5	-70.0
-80	-77.5	-76.8	-76.0	-75.3	-74.7	-74.1	-73.5	-73.0	-72.7
-85	-76.6	-76.3	-76.1	-75.9	-75.6	-75.5	-75.2	-75.0	-74.8

[a] North latitudes positive, south latitudes negative

Table 52--Continued

Values of inclination (I) of magnetic field intensity for 1945 expressed in degrees for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	+87.5	+87.3	+87.2	+87.0	+86.8	+86.6	+86.5	+86.2	+86.0
+80	+88.2	+87.8	+87.4	+86.9	+86.4	+85.9	+85.3	+84.9	+84.4
+75	+88.3	+87.3	+86.6	+86.1	+85.1	+84.6	+84.1	+83.7	+83.2
+70	+88.2	+87.4	+86.5	+85.6	+84.7	+83.7	+82.2	+81.4	+81.9
+65	+86.8	+86.1	+85.3	+84.7	+83.8	+82.6	+81.9	+80.8	+79.8
+60	+84.6	+84.5	+83.8	+82.9	+82.2	+80.6	+80.0	+78.9	+77.7
+55	+82.1	+82.2	+81.7	+80.7	+79.2	+77.4	+77.8	+76.6	+75.3
+50	+79.0	+79.0	+78.8	+78.4	+77.5	+75.8	+75.4	+74.3	+73.2
+45	+74.8	+75.2	+75.5	+75.2	+74.8	+73.8	+72.7	+71.5	+70.6
+40	+71.2	+71.6	+72.1	+72.2	+71.4	+70.8	+70.0	+68.7	+67.0
+35	+66.9	+67.4	+68.1	+68.2	+68.2	+67.2	+66.4	+64.9	+63.9
+30	+62.1	+62.8	+63.8	+64.1	+63.9	+63.6	+63.1	+61.7	+60.2
+25	+56.9	+57.8	+58.8	+59.2	+59.3	+59.1	+58.6	+57.6	+56.0
+20	+50.5	+51.7	+52.9	+54.4	+54.3	+54.2	+53.7	+52.7	+50.9
+15	+43.7	+45.2	+46.9	+47.8	+48.0	+48.4	+48.2	+47.5	+45.4
+10	+36.2	+38.1	+39.9	+41.0	+41.9	+42.2	+42.0	+41.3	+39.4
+ 5	+28.2	+30.0	+32.2	+33.4	+34.5	+35.0	+35.1	+33.6	+31.8
0	+19.3	+21.2	+23.4	+25.0	+26.2	+28.3	+26.6	+25.4	+23.2
- 5	+ 9.5	+11.9	+13.7	+15.7	+17.1	+17.9	+17.9	+17.1	+14.5
-10	- 0.7	+ 1.5	+ 4.4	+ 6.2	+ 8.1	+ 9.4	+ 9.0	+ 7.6	+ 5.2
-15	-10.5	- 8.0	- 5.7	- 3.1	- 1.6	- 0.5	- 0.1	- 1.7	- 3.9
-20	-20.6	-18.0	-14.7	-12.0	-10.0	- 9.2	- 9.5	-10.5	-12.2
-25	-28.0	-25.5	-22.7	-20.4	-18.7	-18.0	-17.4	-18.1	-19.6
-30	-34.9	-32.2	-29.5	-27.5	-26.2	-25.0	-24.4	-25.1	-26.5
-35	-40.4	-38.0	-35.6	-33.3	-31.8	-30.9	-30.6	-31.1	-31.7
-40	-45.1	-43.0	-40.2	-38.4	-37.2	-36.1	-35.8	-36.0	-36.4
-45	-48.8	-47.3	-45.2	-43.4	-42.0	-40.9	-40.5	-40.8	-41.0
-50	-52.3	-50.5	-49.1	-47.5	-46.2	-45.3	-44.8	-44.6	-45.0
-55	-55.9	-54.4	-52.9	-51.6	-50.3	-49.4	-49.0	-48.8	-49.0
-60	-59.5	-58.2	-57.0	-55.8	-55.1	-54.3	-53.6	-53.2	-53.2
-65	-62.6	-61.6	-60.7	-59.8	-59.1	-58.9	-58.2	-57.7	-57.4
-70	-66.3	-66.0	-65.5	-64.8	-64.3	-63.5	-62.5	-62.1	-61.8
-75	-69.7	-69.6	-69.4	-69.1	-68.8	-68.3	-67.8	-67.3	-66.9
-80	-72.5	-72.3	-72.2	-72.1	-71.9	-71.6	-71.4	-71.0	-70.9
-85	-74.7	-74.5	-74.3	-74.1	-73.9	-73.8	-73.6	-73.5	-73.3

[a] North latitudes positive, south latitudes negative

Table 52--Concluded

Values of inclination (I) of magnetic field intensity for 1945 expressed in degrees for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	+85.9	+85.7	+85.5	+85.4	+85.1	+85.0	+84.8	+84.7	+84.7
+80	+84.2	+83.9	+83.6	+83.3	+83.0	+82.8	+82.5	+82.3	+82.2
+75	+82.7	+82.2	+81.8	+81.4	+81.2	+80.8	+80.4	+80.3	+80.1
+70	+81.2	+80.5	+79.8	+79.1	+78.5	+78.4	+78.1	+78.0	+77.9
+65	+79.2	+78.5	+77.7	+77.3	+76.9	+76.7	+76.4	+75.9	+75.5
+60	+76.9	+76.1	+75.4	+74.9	+74.2	+73.6	+73.1	+72.8	+72.8
+55	+74.0	+73.0	+72.4	+71.8	+71.4	+71.0	+70.3	+69.8	+69.7
+50	+71.7	+70.6	+69.7	+68.9	+68.1	+67.4	+66.9	+66.4	+66.1
+45	+69.0	+67.5	+66.2	+65.2	+64.4	+63.5	+63.1	+62.8	+62.2
+40	+65.6	+63.9	+62.4	+61.4	+60.7	+59.2	+58.5	+57.4	+56.7
+35	+61.9	+60.3	+58.4	+57.1	+55.6	+54.3	+53.3	+51.8	+50.3
+30	+58.2	+56.2	+53.8	+51.3	+49.5	+47.8	+45.7	+44.5	+43.7
+25	+53.8	+51.2	+48.4	+45.5	+43.0	+40.9	+38.5	+37.1	+35.3
+20	+48.7	+45.7	+42.6	+39.2	+35.9	+32.6	+29.8	+27.5	+25.7
+15	+42.8	+39.9	+35.9	+32.4	+28.4	+23.7	+19.7	+17.0	+14.5
+10	+36.4	+32.6	+28.7	+23.8	+19.2	+14.5	+ 9.6	+ 6.1	+ 3.8
+ 5	+28.3	+24.8	+20.2	+15.3	+ 9.8	+ 3.7	- 1.3	- 5.3	- 8.0
0	+20.2	+16.1	+11.3	+ 5.8	- 0.2	- 5.3	-10.5	-15.1	-18.6
- 5	+11.5	+ 7.1	+ 1.6	- 3.7	- 8.8	-14.0	-19.9	-24.2	-27.9
-10	+ 2.5	- 2.5	- 7.1	-12.2	-17.4	-22.2	-27.3	-32.0	-35.0
-15	- 7.3	-10.8	-15.4	-20.3	-25.0	-29.4	-34.3	-38.4	-41.7
-20	-15.0	-18.4	-22.9	-27.6	-31.7	-35.6	-39.7	-43.3	-46.7
-25	-22.3	-25.4	-29.5	-33.4	-37.2	-40.3	-43.5	-47.4	-50.7
-30	-28.5	-31.0	-34.8	-38.1	-41.4	-44.2	-47.2	-50.2	-53.0
-35	-33.8	-35.6	-38.3	-41.2	-44.1	-47.1	-49.8	-52.5	-55.1
-40	-38.0	-39.6	-41.8	-44.1	-46.5	-49.4	-52.2	-54.2	-56.5
-45	-42.1	-43.2	-45.0	-46.8	-49.1	-51.1	-53.2	-55.2	-57.4
-50	-45.5	-46.7	-48.1	-49.6	-51.4	-53.2	-54.7	-56.4	-58.3
-55	-49.5	-50.2	-51.2	-52.3	-53.5	-54.7	-56.2	-57.7	-59.1
-60	-53.5	-54.1	-54.8	-55.7	-56.6	-57.6	-58.8	-60.0	-61.1
-65	-57.4	-57.7	-58.1	-58.8	-59.8	-60.6	-61.5	-62.4	-63.6
-70	-61.8	-61.7	-61.9	-62.3	-63.0	-63.8	-64.4	-65.3	-66.0
-75	-66.5	-66.2	-66.1	-66.1	-66.4	-66.5	-67.0	-67.5	-67.9
-80	-70.7	-70.5	-70.3	-70.1	-70.0	-69.9	-69.9	-69.8	-69.8
-85	-73.2	-73.2	-73.1	-73.0	-73.0	-72.9	-72.8	-72.9	-72.9

[a] North latitudes positive, south latitudes negative

Table 53

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	0	5	10	15	20	25	30	35	40
+85	538	539	541	543	544	546	548	549	550
+80	524	532	537	537	537	538	540	542	545
+75	525	526	527	528	529	532	533	535	538
+70	513	513	515	517	518	520	522	526	528
+65	503	503	503	505	508	509	513	519	525
+60	491	492	504	495	496	500	504	509	513
+55	481	482	483	483	485	492	501	501	504
+50	468	469	469	470	474	480	479	486	490
+45	455	455	455	456	458	462	468	469	477
+40	434	435	436	438	439	442	449	454	464
+35	414	415	415	419	423	426	431	438	444
+30	398	397	398	398	400	406	413	420	426
+25	372	377	371	370	374	380	392	398	404
+20	352	355	357	355	359	362	370	377	383
+15	335	339	339	342	346	351	354	358	365
+10	318	322	326	330	334	339	343	347	351
+ 5	309	315	321	324	327	335	340	341	344
0	307	314	317	320	327	332	340	342	344
- 5	305	313	319	323	328	334	339	342	346
-10	306	314	321	332	334	339	342	344	349
-15	303	312	320	326	330	338	342	343	348
-20	301	310	321	327	332	336	339	343	344
-25	297	307	317	324	328	330	333	340	341
-30	299	309	314	317	322	326	329	332	332
-35	304	310	313	318	323	327	330	331	336
-40	307	314	318	320	324	330	336	340	348
-45	321	327	332	334	335	342	348	354	362
-50	340	343	345	350	352	357	362	365	372
-55	356	359	361	364	368	371	376	384	392
-60	381	382	386	389	394	401	412	425	439
-65	413	416	421	427	437	447	459	473	488
-70	464	468	475	483	490	500	510	522	533
-75	515	519	524	530	537	545	522	558	564
-80	554	557	561	565	570	574	578	583	588
-85	586	588	590	593	594	596	599	602	604

[a] North latitudes positive, south latitudes negative

Table 53--Continued

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	45	50	55	60	65	70	75	80	85
+85	552	554	556	558	558	561	562	563	564
+80	548	551	552	556	561	564	568	571	574
+75	542	545	550	554	560	566	571	576	583
+70	530	540	548	553	560	564	569	577	583
+65	530	537	549	555	553	564	574	582	591
+60	520	531	542	559	552	565	574	583	591
+55	511	519	529	539	550	559	567	578	586
+50	500	512	522	532	542	549	555	565	571
+45	486	494	504	513	524	530	540	552	560
+40	474	481	489	499	508	518	526	532	538
+35	452	462	468	475	482	490	499	505	509
+30	435	439	448	456	462	470	475	479	486
+25	410	418	425	433	439	446	454	457	460
+20	390	395	400	405	413	423	428	428	432
+15	372	378	382	389	395	401	406	410	414
+10	356	362	366	374	380	384	389	396	402
+ 5	346	351	357	364	370	378	385	395	402
0	348	348	351	361	368	375	386	397	408
- 5	351	349	353	362	370	373	392	411	420
-10	357	352	356	367	379	382	404	425	438
-15	350	357	365	374	385	392	417	438	455
-20	349	360	368	380	394	406	425	447	468
-25	344	352	364	378	394	410	433	457	479
-30	341	350	360	372	392	413	439	466	488
-35	344	356	366	379	398	420	448	474	493
-40	359	368	376	390	408	432	455	476	506
-45	369	380	391	404	422	442	461	486	516
-50	379	385	398	414	432	452	474	494	525
-55	402	409	425	441	459	480	499	519	535
-60	450	461	474	485	498	512	525	537	552
-65	501	514	527	537	545	553	561	572	583
-70	542	551	560	567	574	582	589	598	607
-75	570	576	582	588	595	602	609	616	621
-80	592	596	601	606	612	618	622	626	630
-85	608	610	614	617	620	623	625	628	631

[a] North latitudes positive, south latitudes negative

Table 53--Continued

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	90	95	100	105	110	115	120	125	130
+85	565	566	567	568	569	569	570	570	570
+80	574	575	576	577	578	579	579	580	580
+75	586	590	610	606	600	599	598	596	594
+70	589	595	602	608	615	619	616	608	599
+65	599	606	611	616	619	620	620	617	604
+60	599	604	608	611	612	612	611	605	602
+55	596	598	601	601	601	601	598	590	582
+50	581	586	590	592	592	590	585	582	559
+45	567	571	573	574	572	575	564	552	529
+40	546	548	550	549	542	543	537	523	510
+35	517	519	523	522	518	510	501	491	483
+30	489	492	492	490	486	481	474	464	447
+25	463	464	464	461	457	450	444	436	426
+20	435	438	437	434	432	427	421	412	404
+15	416	417	416	416	412	408	403	395	390
+10	406	410	411	407	404	399	394	389	383
+ 5	407	409	409	407	404	400	395	390	385
0	415	420	418	417	415	412	406	402	396
- 5	428	438	438	437	432	429	423	419	417
-10	450	459	458	457	457	455	450	444	442
-15	473	482	483	487	487	485	483	481	480
-20	487	498	508	517	517	517	516	514	512
-25	501	522	534	542	545	545	547	552	551
-30	514	538	554	563	569	574	573	576	578
-35	521	544	566	574	591	596	599	601	603
-40	533	553	574	588	600	607	614	622	623
-45	537	554	575	600	617	626	632	636	637
-50	540	562	588	610	629	642	654	661	661
-55	554	578	602	624	644	652	660	669	676
-60	573	596	618	631	638	645	656	666	680
-65	593	614	630	638	646	652	661	671	682
-70	615	624	633	641	649	656	664	673	681
-75	627	632	639	647	654	660	665	670	674
-80	633	638	644	650	655	659	663	665	667
-85	634	636	638	641	643	645	648	648	650

[a] North latitudes positive, south latitudes negative

Table 53--Continued

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	135	140	145	150	155	160	165	170	175
+85	570	570	570	571	571	571	571	570	570
+80	580	580	580	579	578	577	576	575	575
+75	591	588	586	584	581	578	575	573	572
+70	587	584	582	581	578	572	568	565	564
+65	589	583	578	573	568	558	554	554	560
+60	587	579	570	561	552	545	536	538	537
+55	572	564	560	551	537	527	523	508	506
+50	548	537	531	515	497	491	483	478	477
+45	522	516	496	483	470	461	454	449	445
+40	497	483	469	453	442	431	424	419	418
+35	468	452	441	425	414	406	399	396	394
+30	437	426	412	404	392	383	377	374	371
+25	414	402	392	384	374	366	359	356	356
+20	393	382	373	365	356	350	345	344	344
+15	381	372	362	354	350	345	341	337	335
+10	374	367	361	353	348	345	340	340	337
+ 5	377	371	365	360	354	352	347	344	343
0	390	386	380	375	370	367	362	357	354
- 5	413	409	402	397	393	390	386	380	377
-10	442	437	430	427	421	416	410	405	399
-15	476	472	467	458	454	449	444	436	430
-20	510	510	500	495	485	482	476	470	459
-25	544	538	533	530	523	516	506	499	492
-30	573	568	564	560	555	544	536	531	522
-35	603	600	594	589	585	573	565	557	550
-40	626	625	620	615	611	602	592	585	576
-45	636	640	638	637	628	622	616	610	603
-50	657	662	654	658	648	640	639	629	621
-55	674	673	674	679	674	670	666	658	647
-60	682	682	685	689	687	684	682	680	674
-65	692	700	701	702	699	696	693	688	683
-70	687	692	697	697	696	694	689	684	678
-75	678	680	682	682	681	680	679	678	676
-80	669	670	670	670	668	668	667	666	663
-85	652	652	652	652	652	651	651	650	648

[a] North latitudes positive, south latitudes negative

Table 53--Continued

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	180	185	190	195	200	205	210	215	220
+85	570	570	570	569	569	569	568	568	567
+80	574	574	574	575	575	576	576	578	578
+75	570	568	569	570	570	572	574	577	580
+70	562	560	562	563	566	567	572	577	581
+65	559	548	548	549	556	559	564	571	577
+60	541	539	538	539	544.	545	555	561	567
+55	506	509	511	514	520	528	537	545	554
+50	476	479	479	485	491	503	514	527	538
+45	444	449	453	460	470	479	487	497	513
+40	420	422	426	434	442	451	463	474	486
+35	392	394	400	408	417	428	439	448	462
+30	374	376	381	386	394	406	415	426	438
+25	357	361	366	369	376	382	390	400	410
+20	344	346	349	353	358	364	371	379	387
+15	335	335	338	343	347	351	357	360	366
+10	336	335	336	338	339	341	345	348	350
+ 5	341	340	339	339	338	337	338	339	340
0	352	349	346	343	340	339	336	336	336
- 5	374	370	364	359	353	346	341	338	334
-10	394	388	382	374	365	360	354	348	342
-15	422	413	405	396	387	380	372	364	356
-20	451	440	432	422	408	402	392	386	378
-25	482	472	460	448	439	429	420	411	404
-30	510	501	491	478	467	460	447	437	428
-35	542	531	519	507	496	486	476	465	456
-40	564	555	543	523	512	509	502	492	488
-45	589	581	572	567	546	538	534	529	520
-50	614	609	600	594	585	573	562	552	544
-55	638	627	626	620	608	600	591	582	570
-60	667	656	647	639	631	626	622	613	603
-65	674	666	659	652	647	643	636	629	620
-70	671	665	660	655	650	646	641	634	627
-75	672	666	662	657	654	651	647	640	632
-80	663	660	658	657	654	653	648	639	634
-85	646	645	643	641	638	635	633	631	628

[a] North latitudes positive, south latitudes negative

Table 53--Continued

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	225	230	235	240	245	250	255	260	265
+85	567	567	566	565	564	563	563	562	561
+80	580	580	580	579	578	577	575	573	572
+75	582	585	587	587	586	585	585	583	582
+70	585	589	592	594	594	592	589	587	584
+65	583	590	594	598	602	604	603	601	598
+60	578	588	596	602	608	610	611	612	617
+55	566	574	585	595	603	611	613	616	617
+50	548	561	572	582	592	600	605	608	611
+45	523	536	551	563	572	578	586	597	595
+40	502	515	527	539	550	560	563	570	577
+35	472	486	500	507	522	532	541	550	555
+30	446	461	473	483	488	503	511	519	527
+25	420	430	442	451	463	476	498	487	493
+20	394	402	413	420	429	444	451	459	462
+15	372	377	384	391	399	409	419	427	428
+10	353	358	362	366	371	378	383	389	394
+ 5	341	344	347	349	351	354	358	363	365
0	335	333	331	331	333	338	339	341	341
- 5	332	328	327	323	323	326	326	324	323
-10	339	333	329	324	322	322	317	315	312
-15	352	345	337	332	329	323	318	315	310
-20	368	360	354	349	345	336	327	321	313
-25	390	380	375	368	361	352	344	334	324
-30	419	409	399	391	384	375	364	354	341
-35	448	438	428	418	411	401	389	378	363
-40	476	468	459	448	439	424	416	403	384
-45	507	496	488	481	469	457	446	430	407
-50	534	523	515	507	496	484	470	449	441
-55	562	556	550	543	531	516	501	488	470
-60	596	587	579	577	563	548	527	511	496
-65	610	600	590	580	568	557	544	527	514
-70	620	610	600	590	580	567	556	546	533
-75	624	616	607	599	590	582	574	564	555
-80	628	624	616	611	605	597	591	586	579
-85	625	623	620	617	613	610	606	603	600

[a] North latitudes positive, south latitudes negative

Table 53--Continued

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	270	275	280	285	290	295	300	305	310
+85	560	559	558	556	554	553	551	549	548
+80	569	568	563	560	557	554	553	549	546
+75	580	577	574	569	565	561	555	549	544
+70	581	579	576	574	572	567	564	558	550
+65	594	589	584	580	582	577	568	560	548
+60	611	603	594	586	582	572	562	554	546
+55	612	606	599	591	583	576	562	551	541
+50	609	604	597	588	580	570	556	543	541
+45	598	596	587	581	571	559	548	535	521
+40	579	577	575	568	556	545	534	516	505
+35	557	556	551	546	538	524	513	495	484
+30	530	530	528	525	516	504	495	478	463
+25	498	499	498	495	488	481	474	458	443
+20	467	470	466	469	463	454	441	432	419
+15	430	433	436	435	428	425	414	408	394
+10	398	400	403	401	400	396	386	380	369
+ 5	369	372	372	370	369	364	360	352	344
0	338	345	344	343	340	342	332	324	318
- 5	324	323	320	317	313	309	305	299	293
-10	312	308	303	299	294	289	284	278	275
-15	303	297	291	286	279	273	268	264	260
-20	304	296	288	279	272	265	260	254	253
-25	313	302	290	280	272	263	257	251	248
-30	327	313	299	286	276	267	259	252	249
-35	344	328	311	297	285	276	267	259	255
-40	364	349	328	315	304	293	284	276	270
-45	390	376	359	344	328	316	305	300	294
-50	421	402	386	373	358	346	335	327	321
-55	453	437	420	406	393	379	371	362	355
-60	478	466	451	440	430	421	411	402	396
-65	499	485	474	465	459	457	448	441	437
-70	521	509	499	491	485	480	478	476	474
-75	546	536	528	521	516	512	509	507	507
-80	573	567	561	556	552	549	546	545	543
-85	597	595	591	590	588	586	584	583	582

[a] North latitudes positive, south latitudes negative

Table 53--Concluded

Values of total intensity (F) of magnetic field for 1945 expressed in 100-gamma units, for 5-degree intervals of geographic latitude and longitude

Geographic latitude in degrees[a]	Geographic east longitude in degrees								
	315	320	325	330	335	340	345	350	355
+85	548	546	545	543	542	540	539	538	537
+80	542	537	533	530	526	523	521	522	523
+75	538	533	528	524	520	518	518	520	523
+70	543	535	529	522	518	516	514	514	514
+65	538	530	526	522	516	512	507	504	504
+60	537	527	519	511	507	502	495	491	491
+55	530	521	512	503	495	490	486	483	482
+50	518	511	503	495	483	474	472	468	466
+45	504	494	484	477	468	462	460	458	454
+40	492	477	465	463	455	449	444	436	433
+35	468	454	443	438	430	425	420	416	416
+30	450	436	424	413	404	402	398	395	398
+25	426	413	397	387	378	377	374	376	372
+20	405	388	376	369	360	355	350	347	351
+15	380	369	357	349	341	336	332	330	333
+10	360	347	337	329	323	318	316	314	317
+ 5	333	324	315	308	306	303	303	304	306
0	310	301	295	292	291	291	295	298	303
- 5	288	283	278	279	279	282	286	287	297
-10	272	266	268	268	272	278	279	285	297
-15	257	256	259	261	265	271	275	283	292
-20	252	253	252	255	261	268	274	280	291
-25	248	249	249	254	260	268	273	281	290
-30	247	248	251	253	260	268	275	283	291
-35	255	254	255	259	263	272	279	288	295
-40	265	265	266	270	273	279	289	294	301
-45	290	286	288	291	294	298	304	308	313
-50	317	315	314	315	317	319	322	327	333
-55	350	345	341	339	340	341	345	350	354
-60	388	384	380	376	375	375	376	378	379
-65	431	427	424	419	415	413	412	413	412
-70	474	471	468	465	462	460	459	459	461
-75	506	506	506	506	506	507	507	509	510
-80	542	542	543	543	545	545	546	549	551
-85	582	581	580	580	580	582	583	584	585

[a] North latitudes positive, south latitudes negative

FIGURES 144 - 150

Charts of the Earth's main field for 1945

Figure Page

144(A)-(Q). Declination 473

145(A)-(Q). Horizontal intensity 490

146(A)-(Q). Vertical intensity 507

147(A)-(C). Inclination 524

148(A)-(C). North intensity 526

149(A)-(C). East intensity 528

150(A)-(C). Total intensity 530

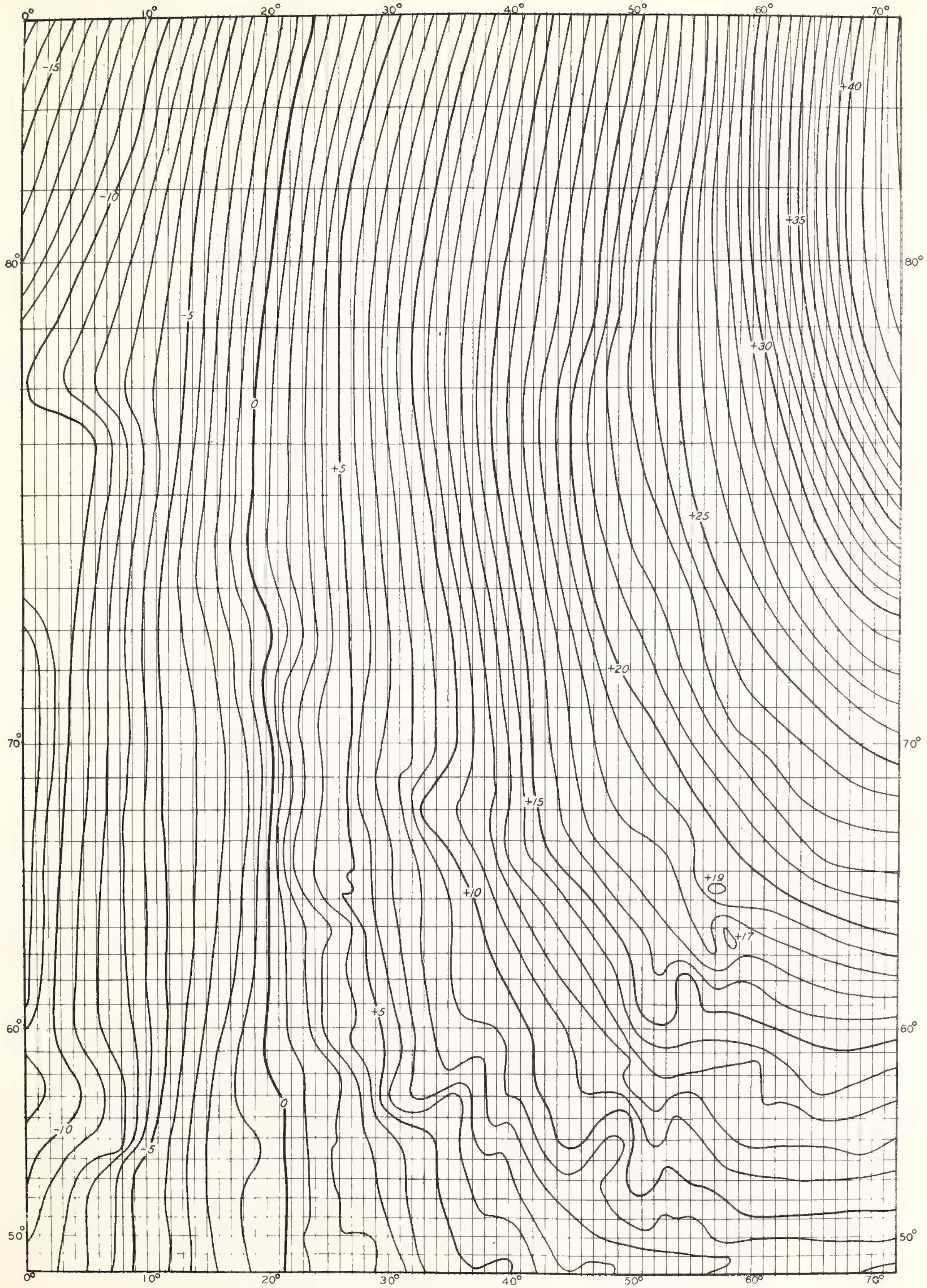

FIG. 144 (A)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

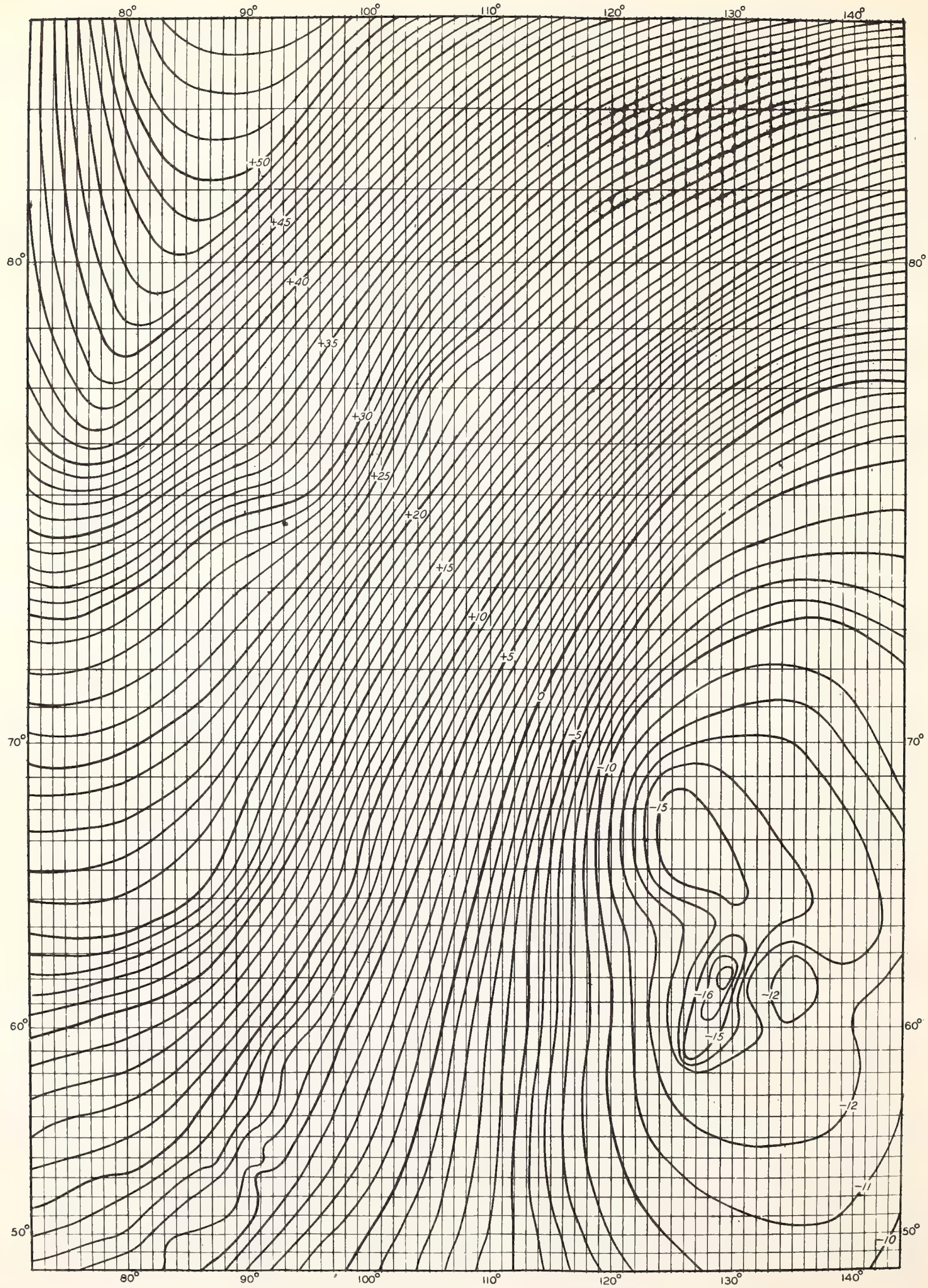

FIG. 144(B)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

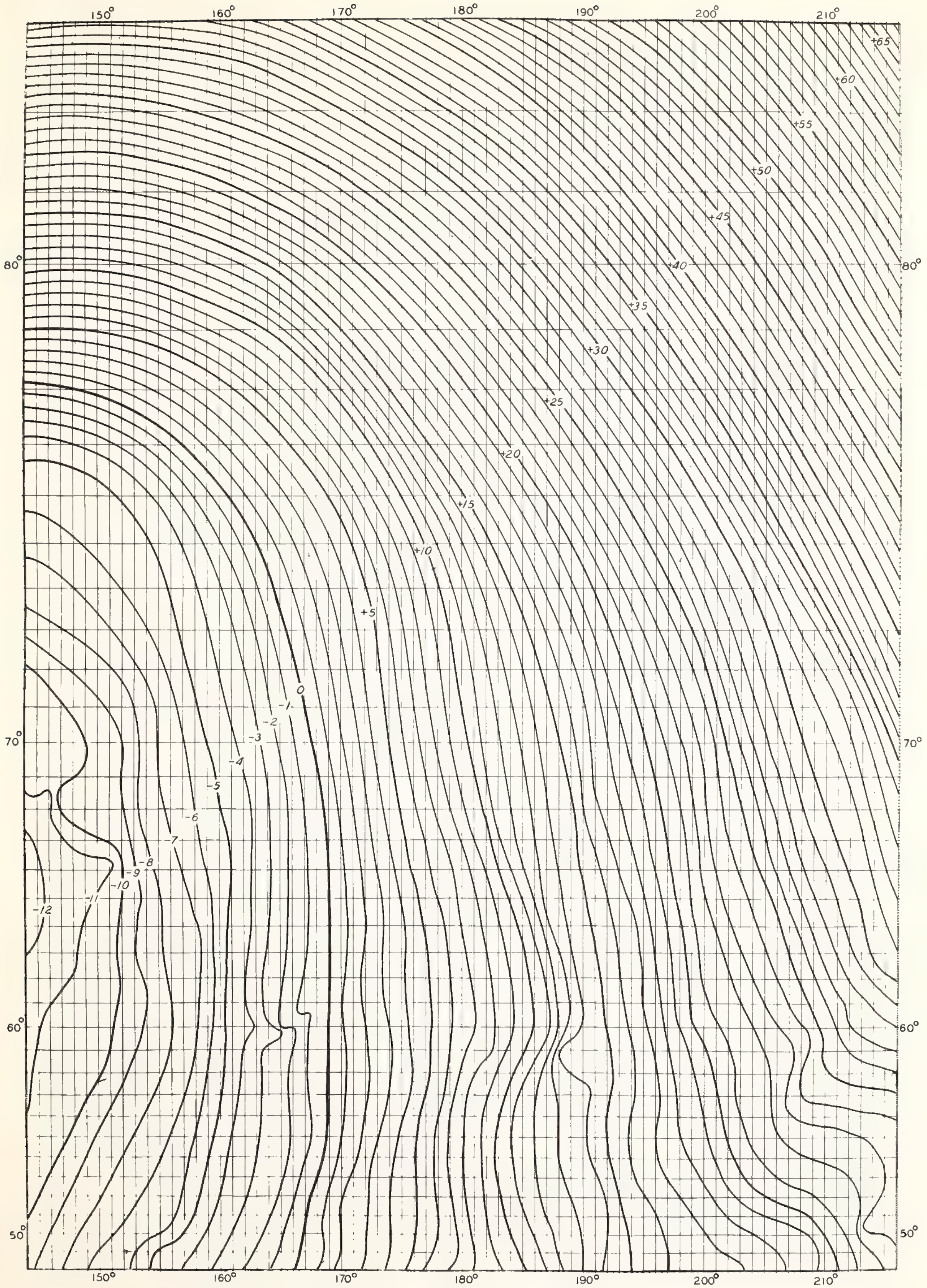

FIG. 144(C) — THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

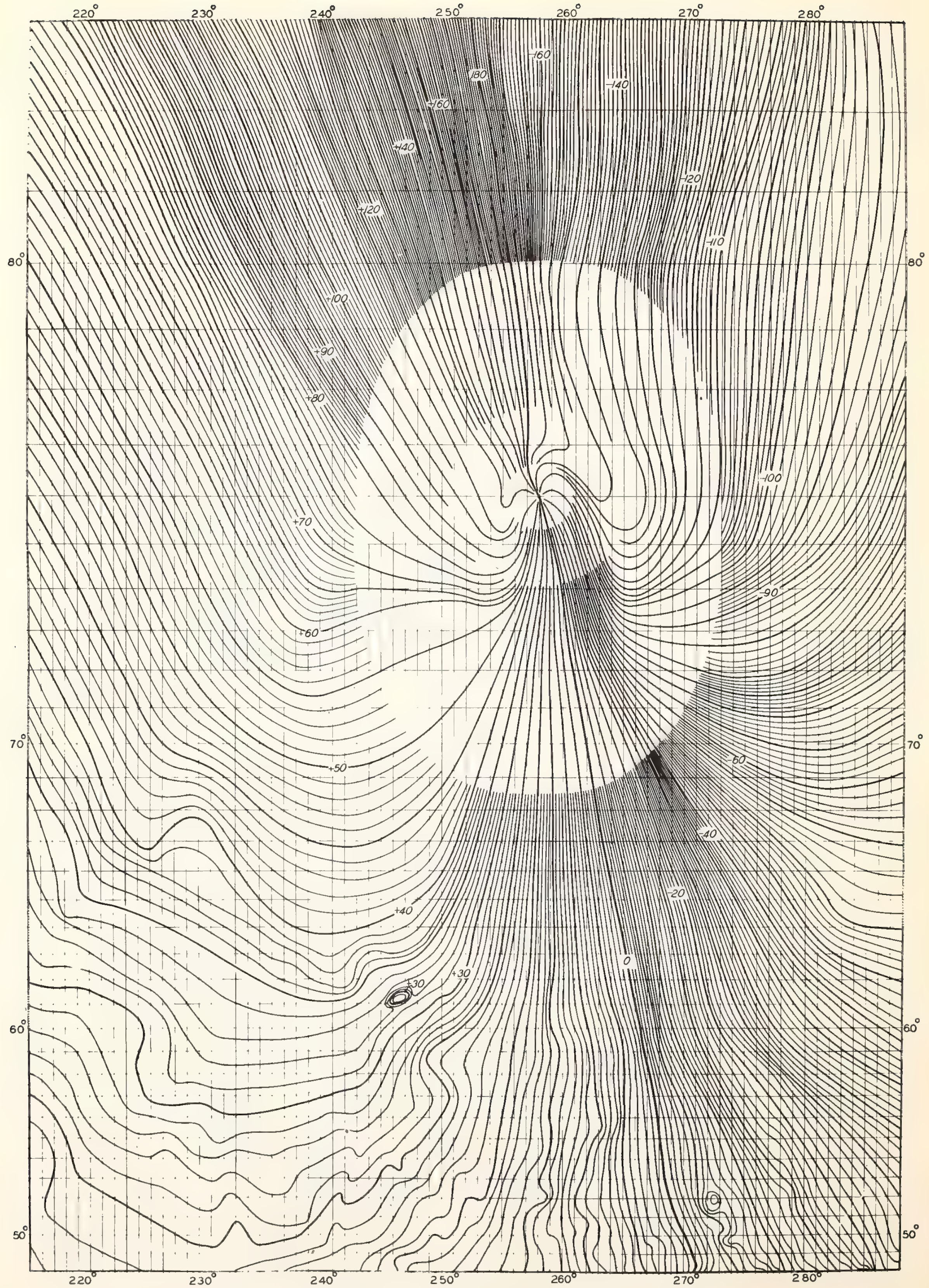

FIG. 144 (D)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

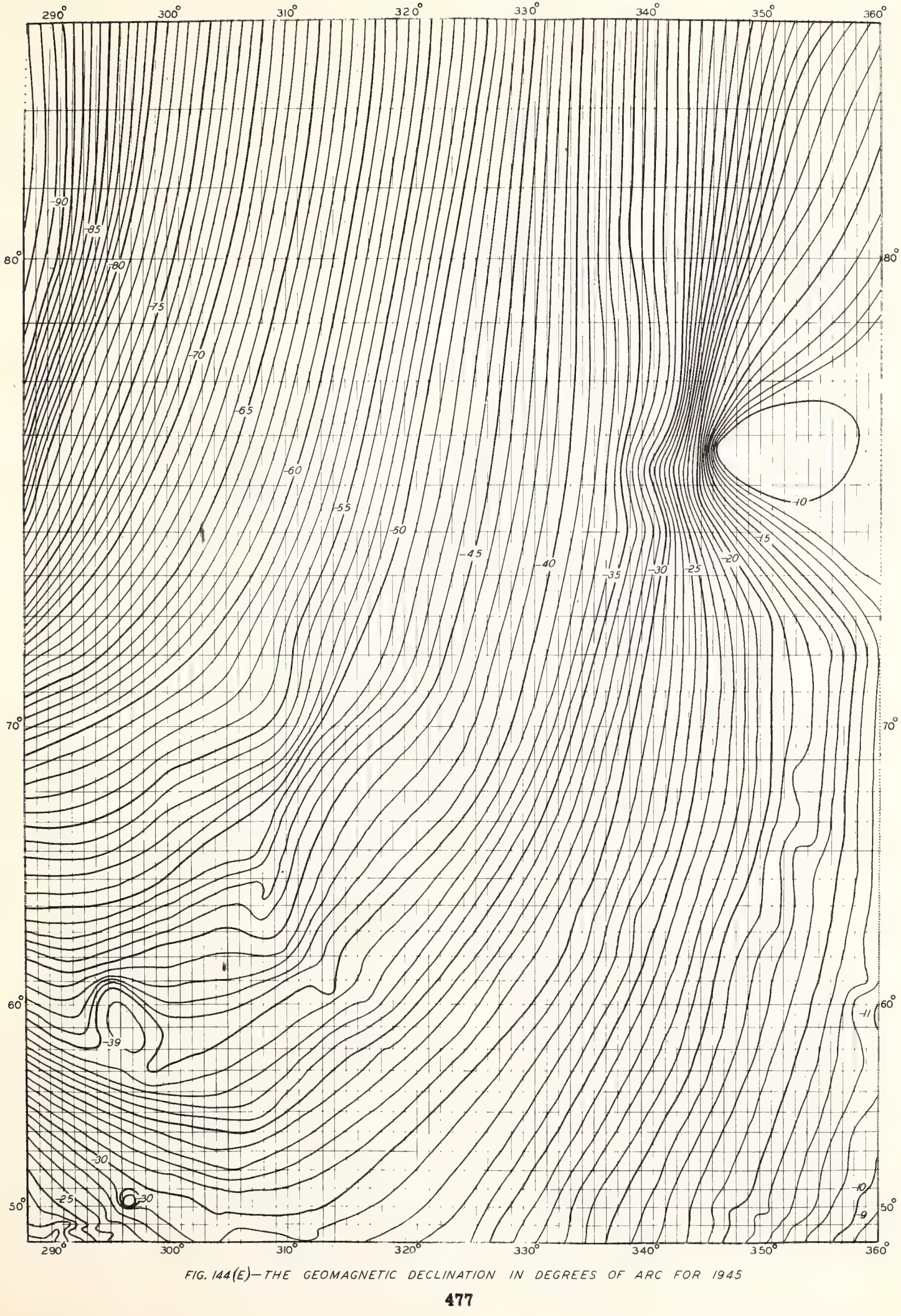

FIG. 144(E)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

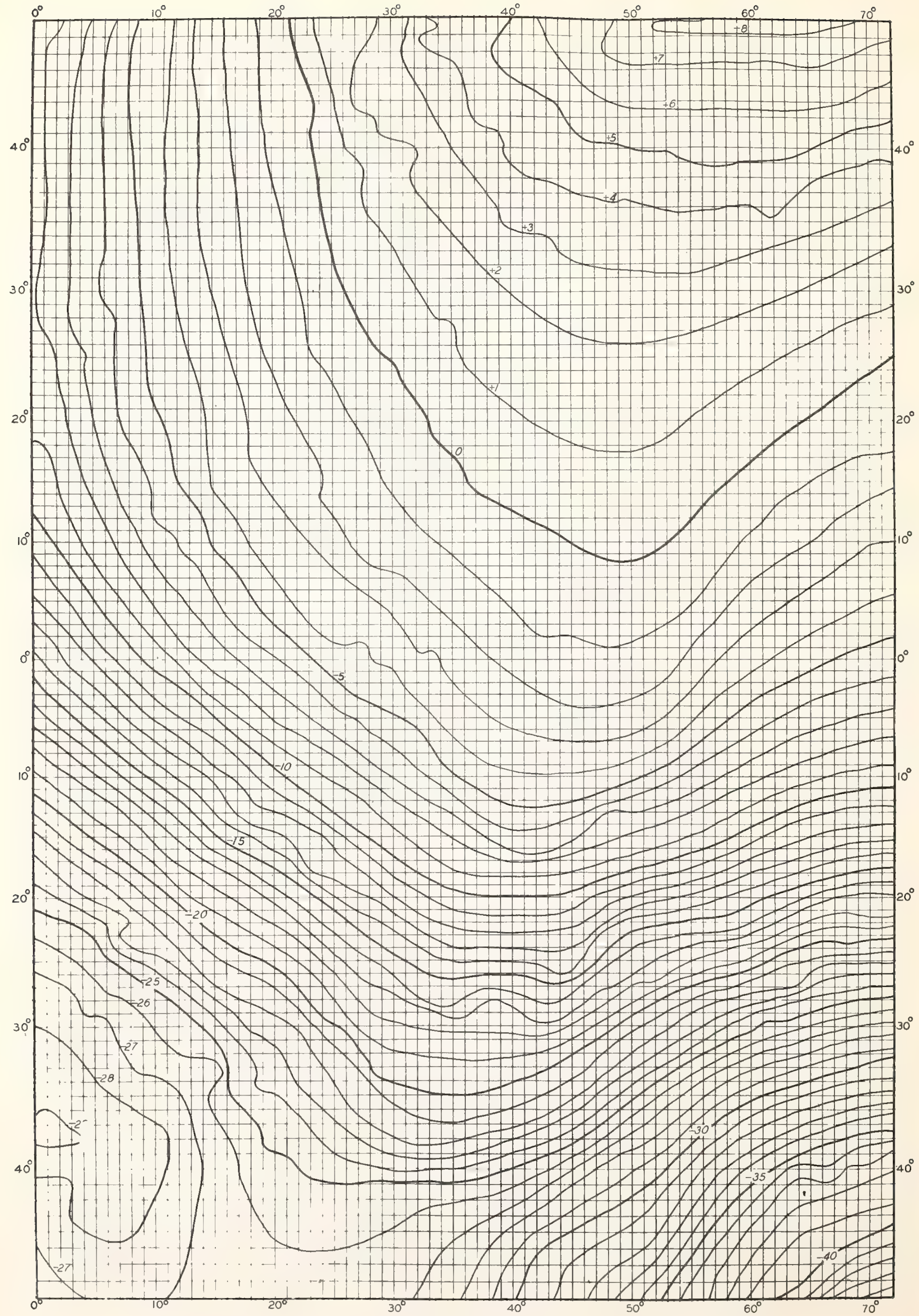

FIG. 144(F) — THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

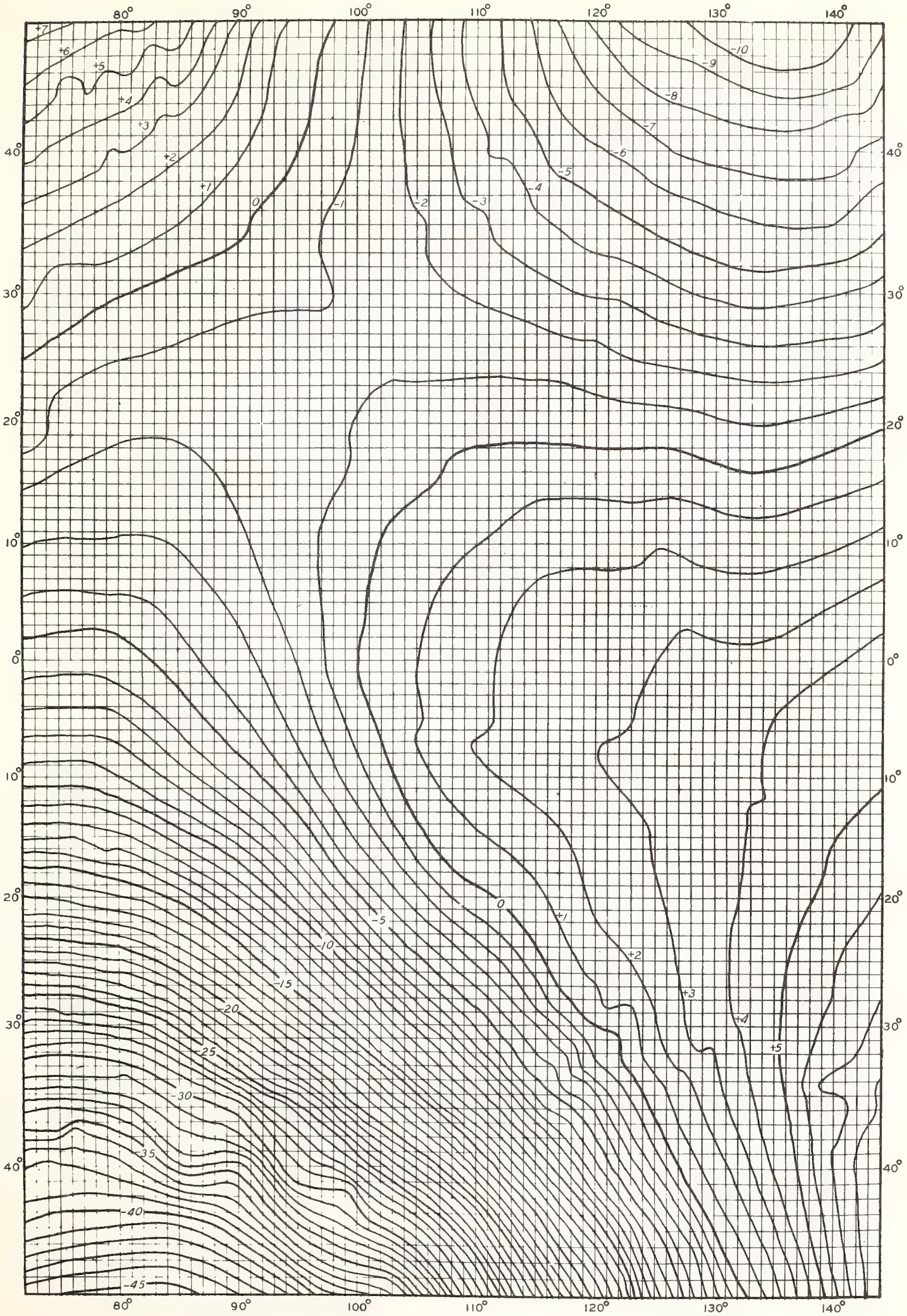

FIG. 144(G) — THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

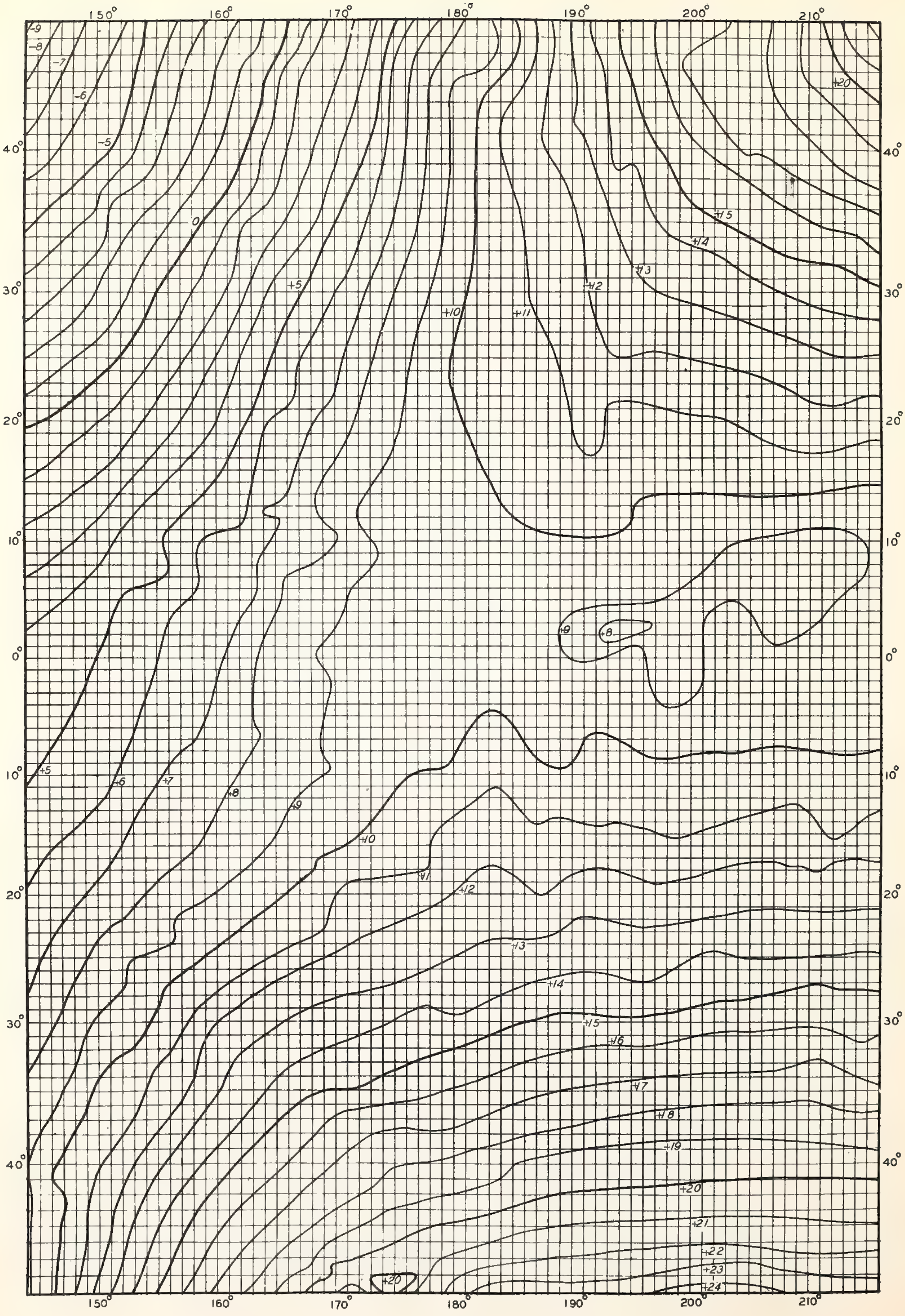

FIG. 144(H)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

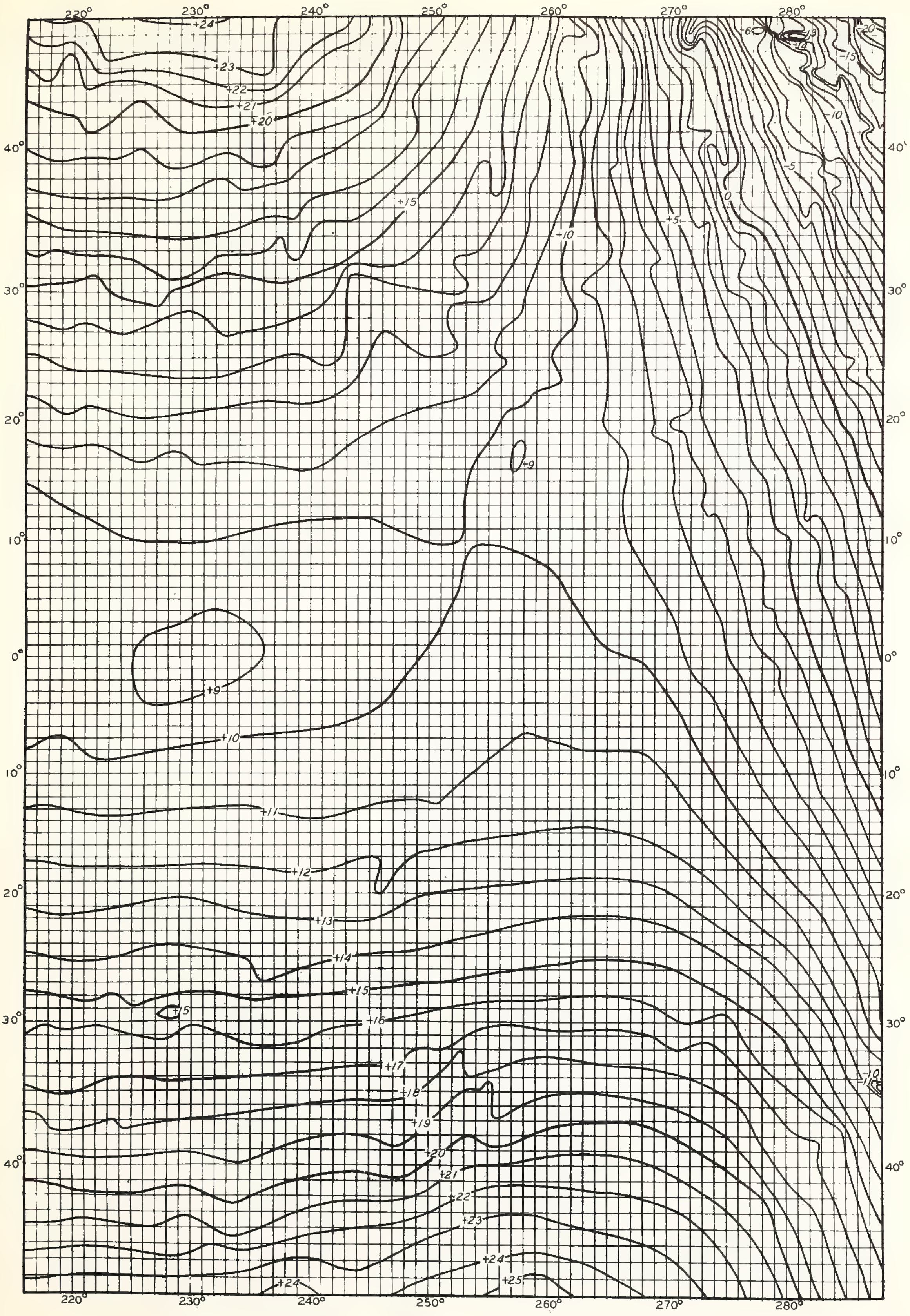

FIG. 144 (I)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

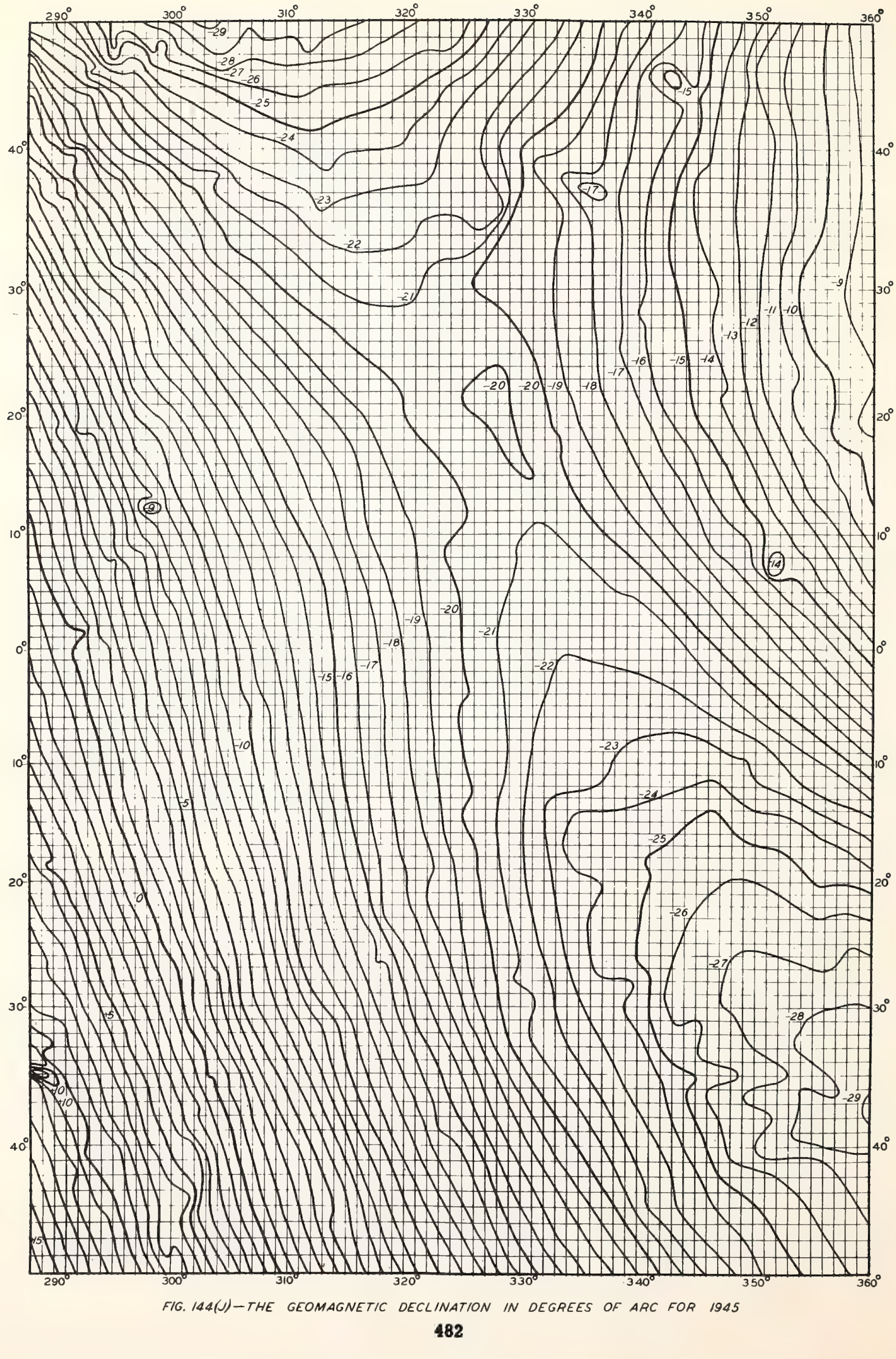

FIG. 144(J)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

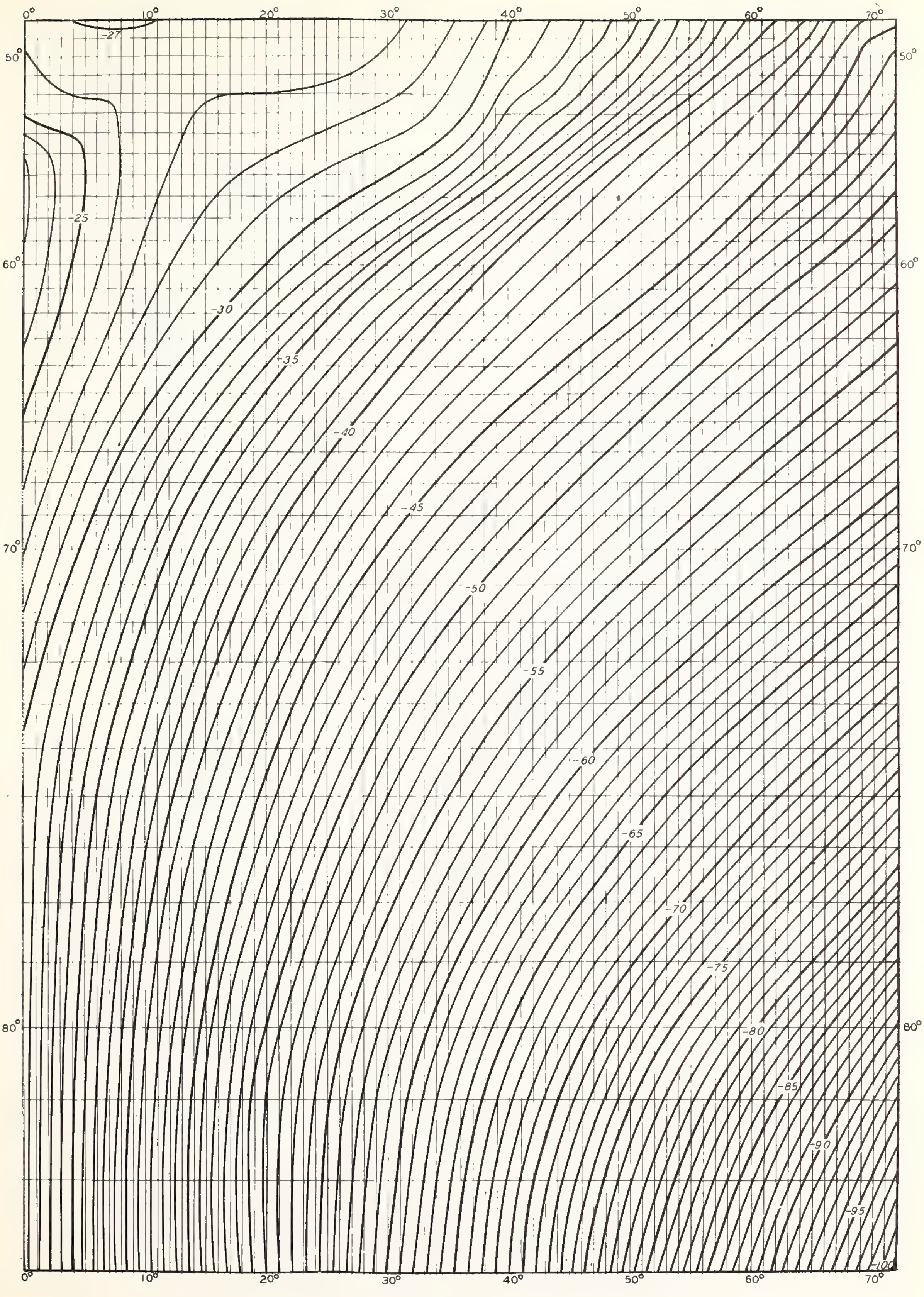

FIG. 144(K)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

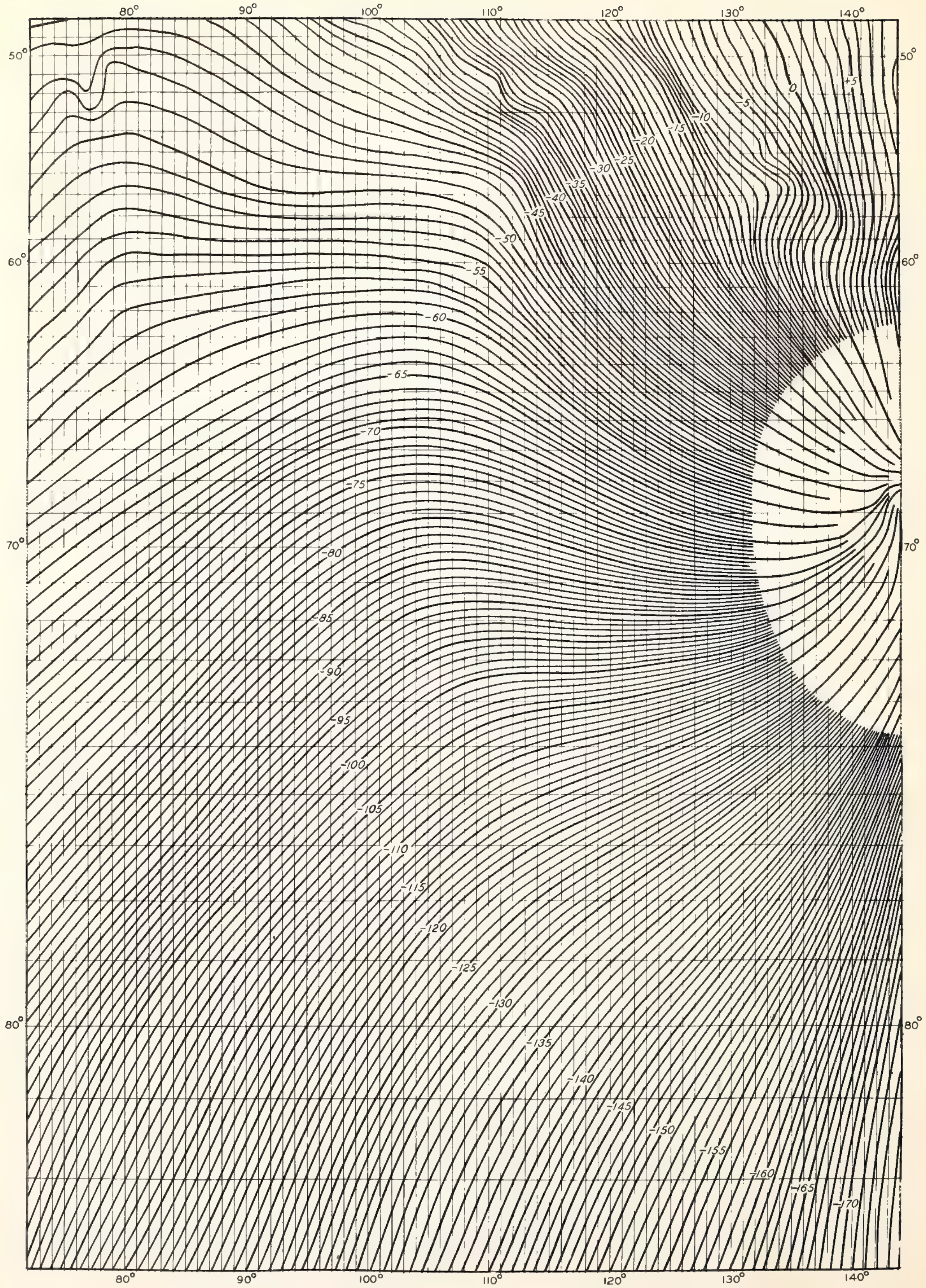

FIG. 144(L) — THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

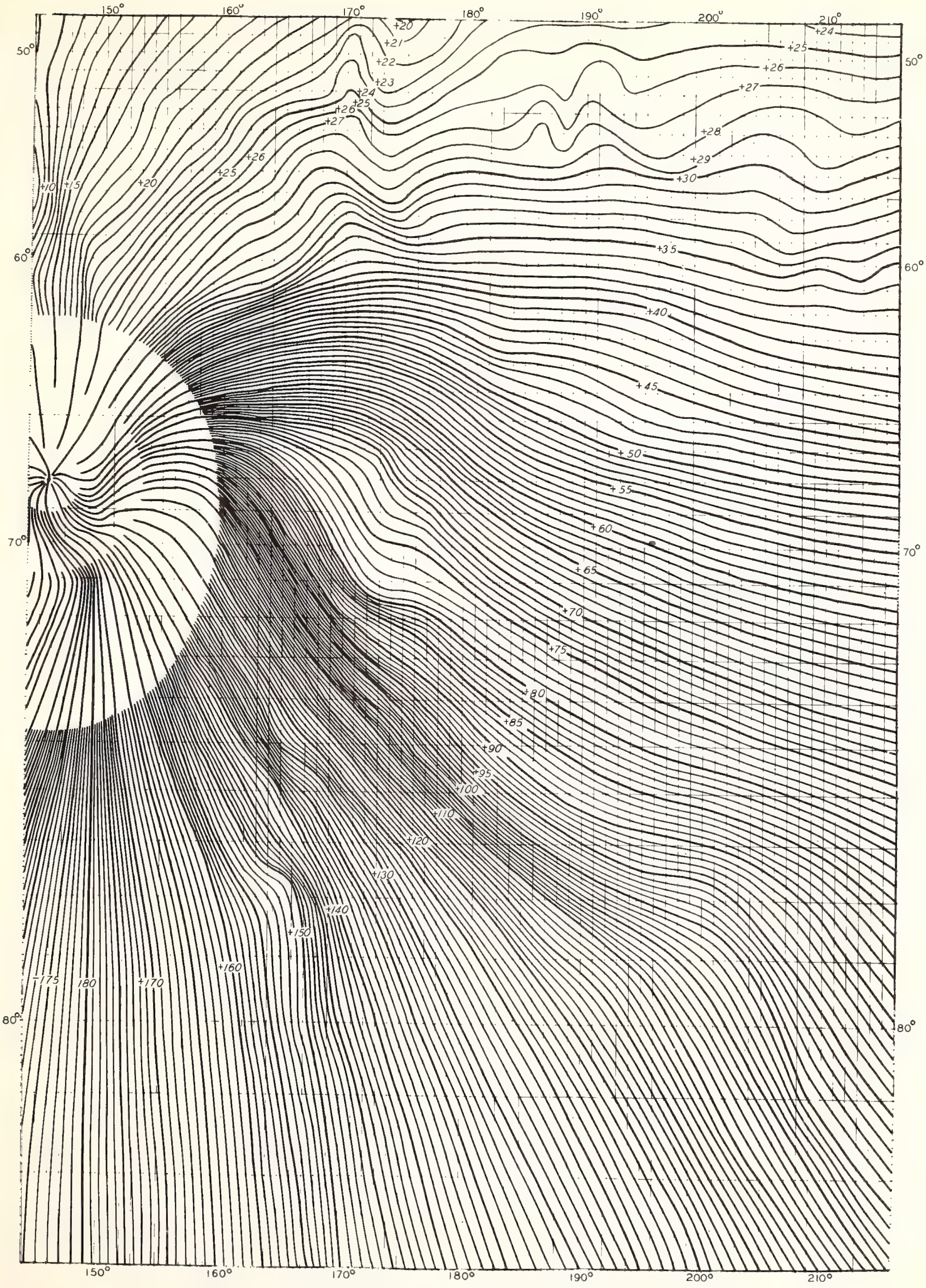

FIG. 144(M)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

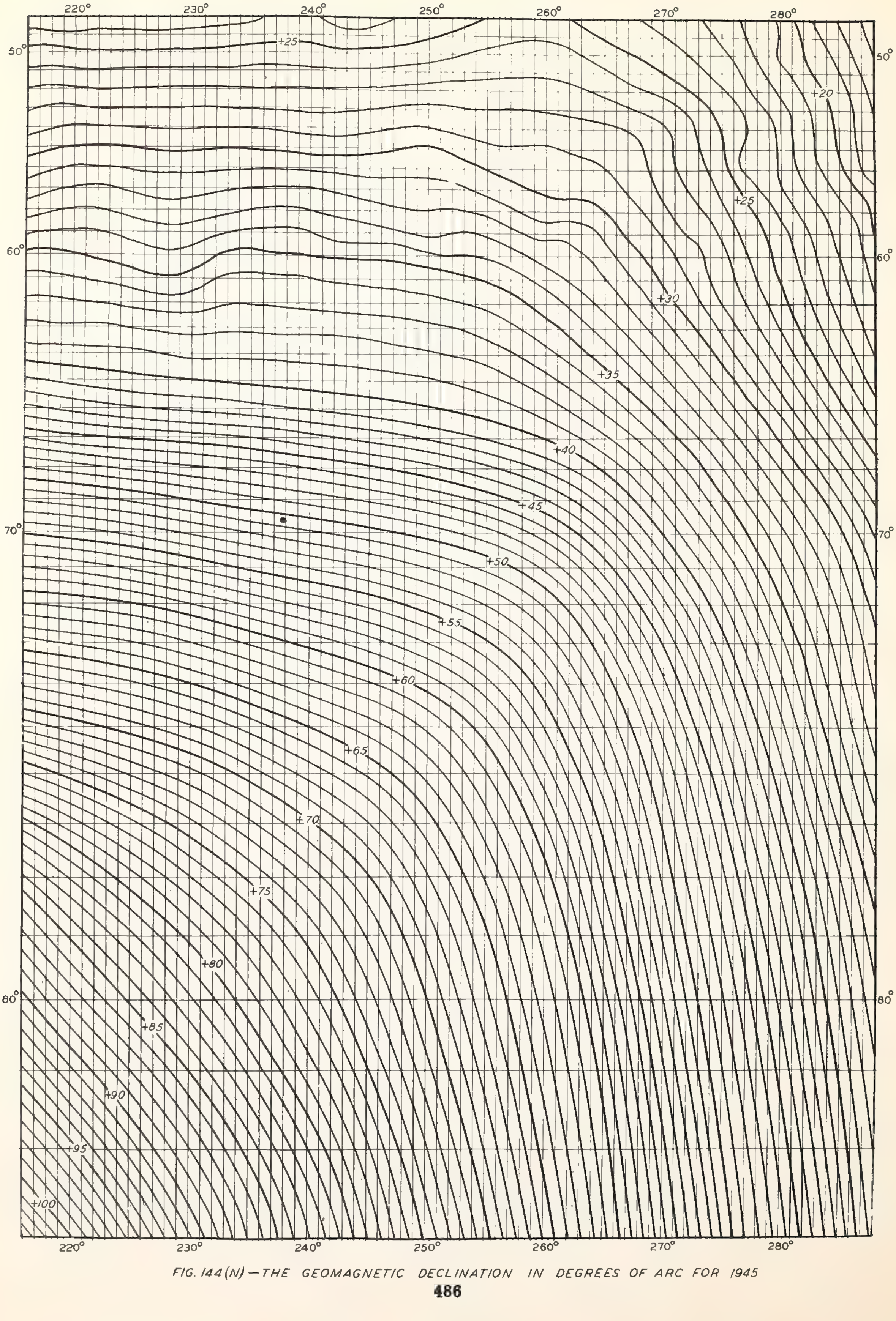

FIG. 144 (N) — THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

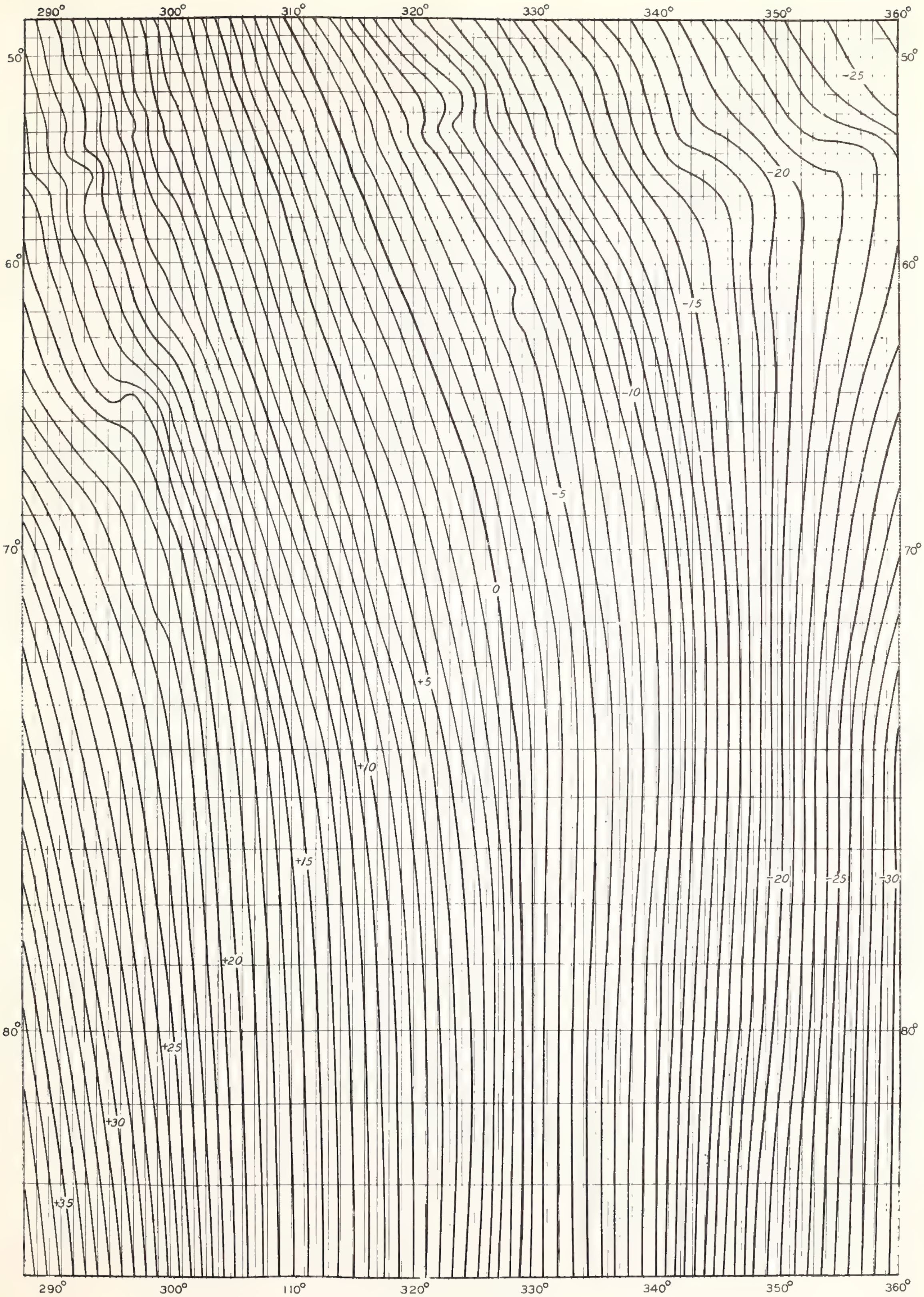

FIG. 144(O)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945

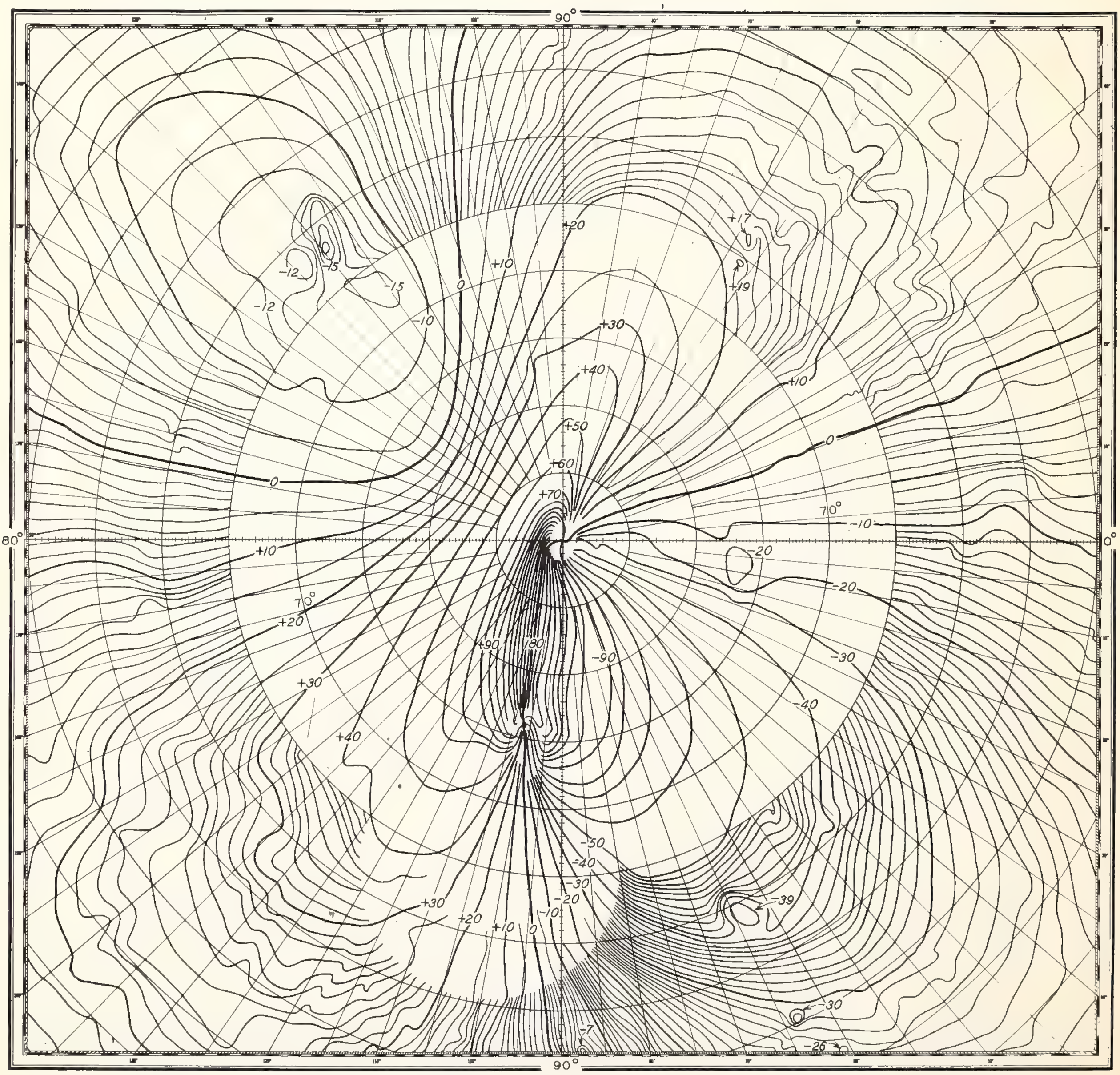

FIG. 144(P)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945, NORTH POLAR REGION

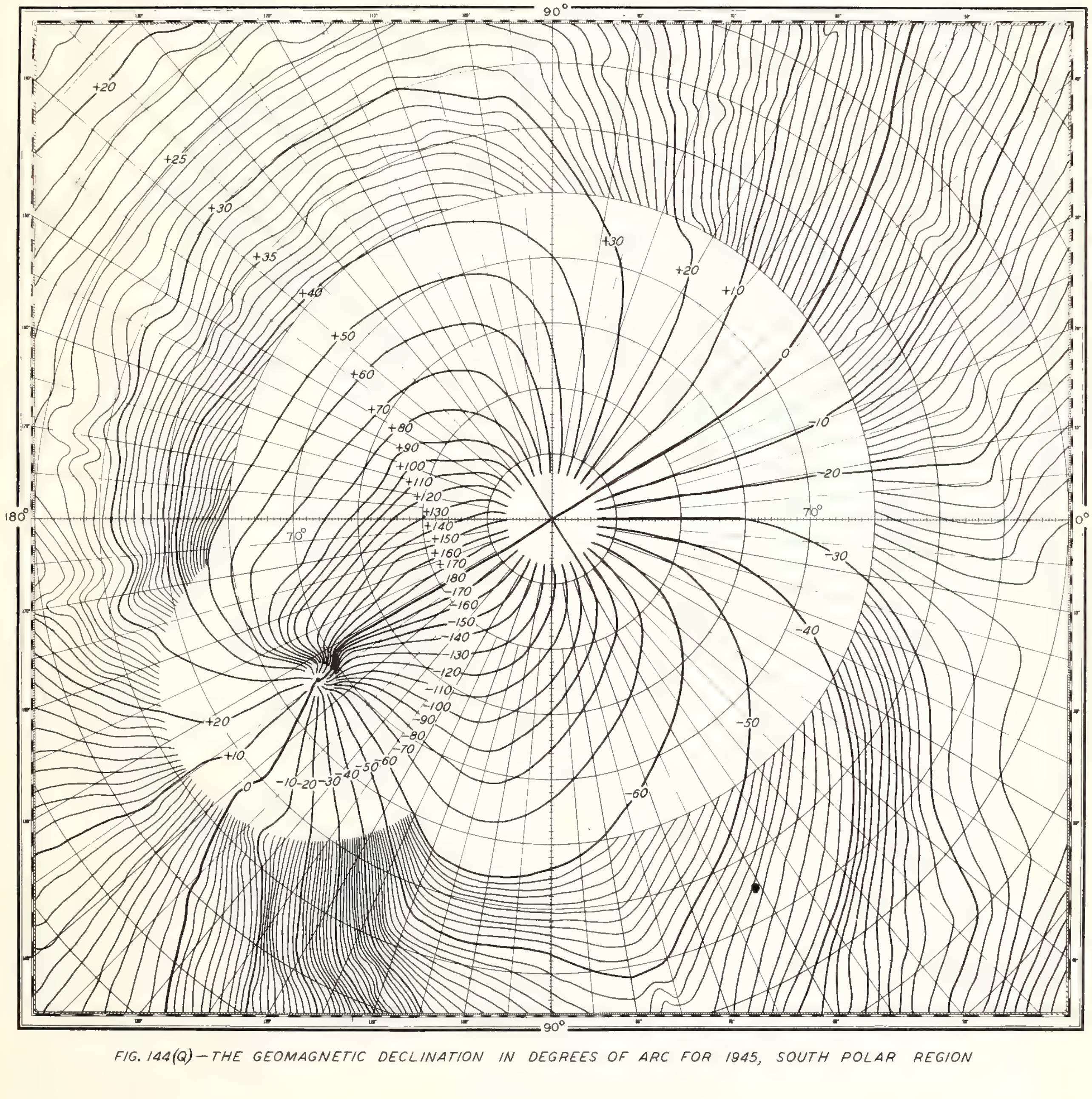

FIG. 144(Q)—THE GEOMAGNETIC DECLINATION IN DEGREES OF ARC FOR 1945, SOUTH POLAR REGION

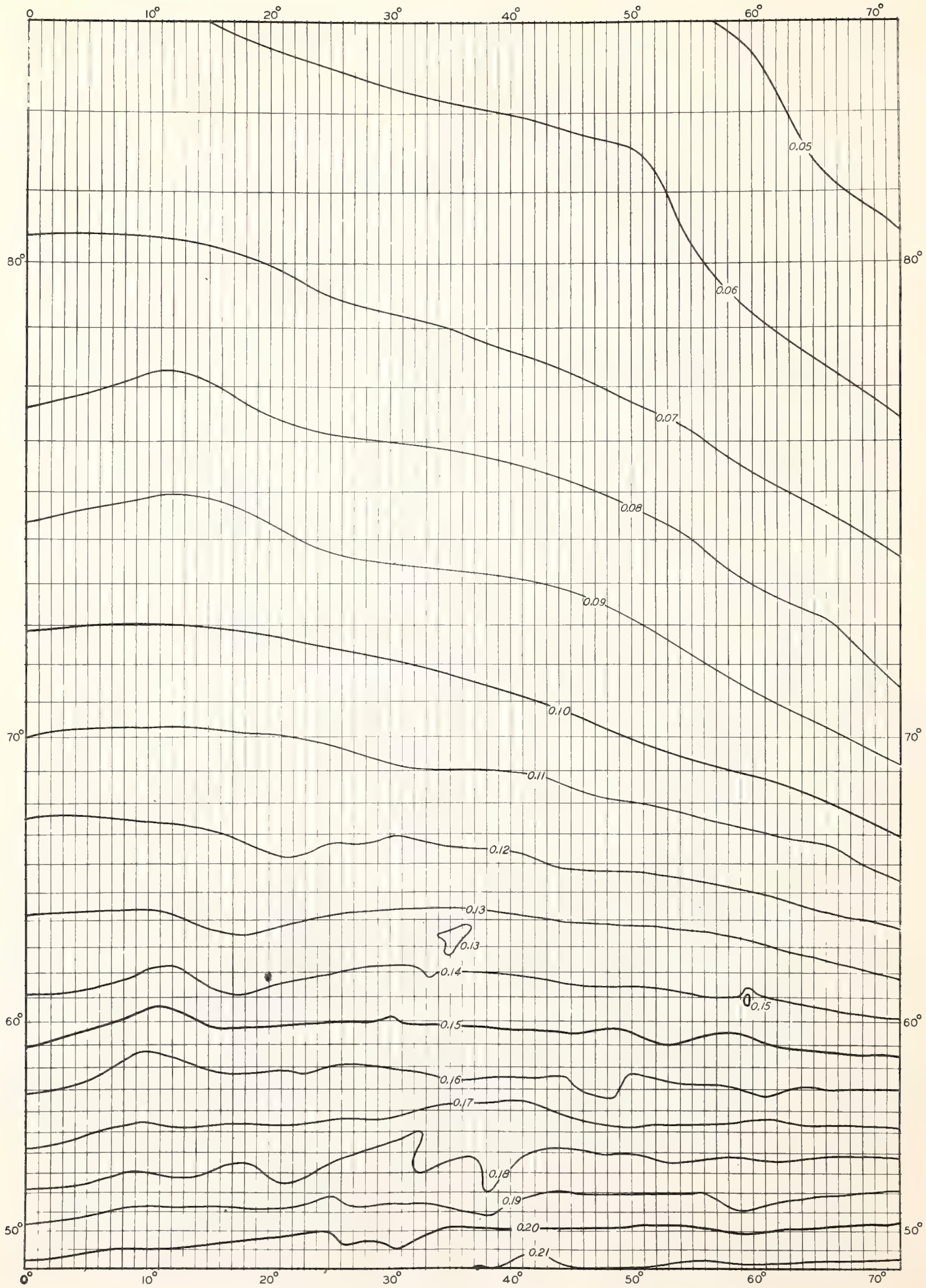

FIG. 145 (A)–THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

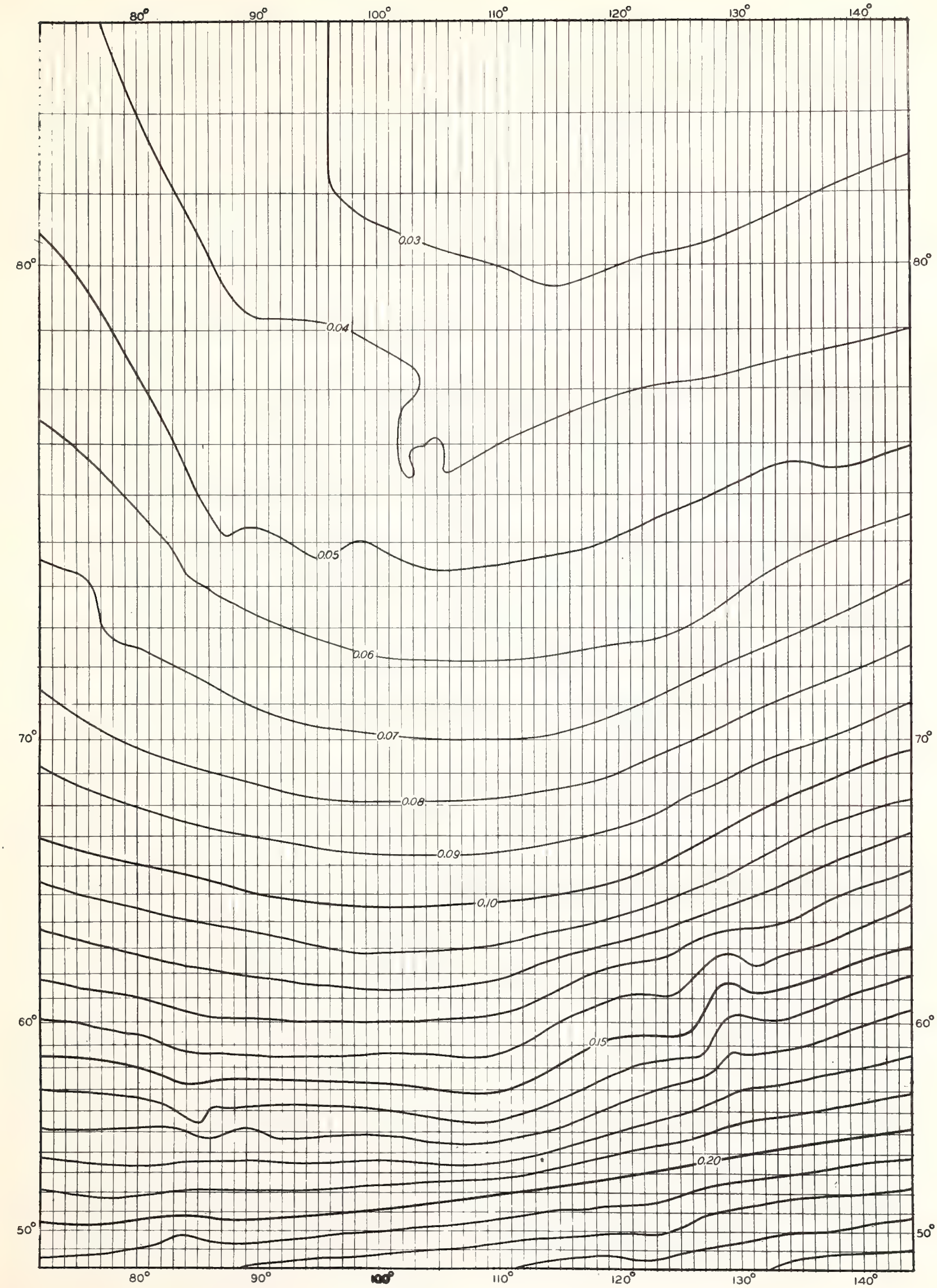

FIG. 145 (B)–THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

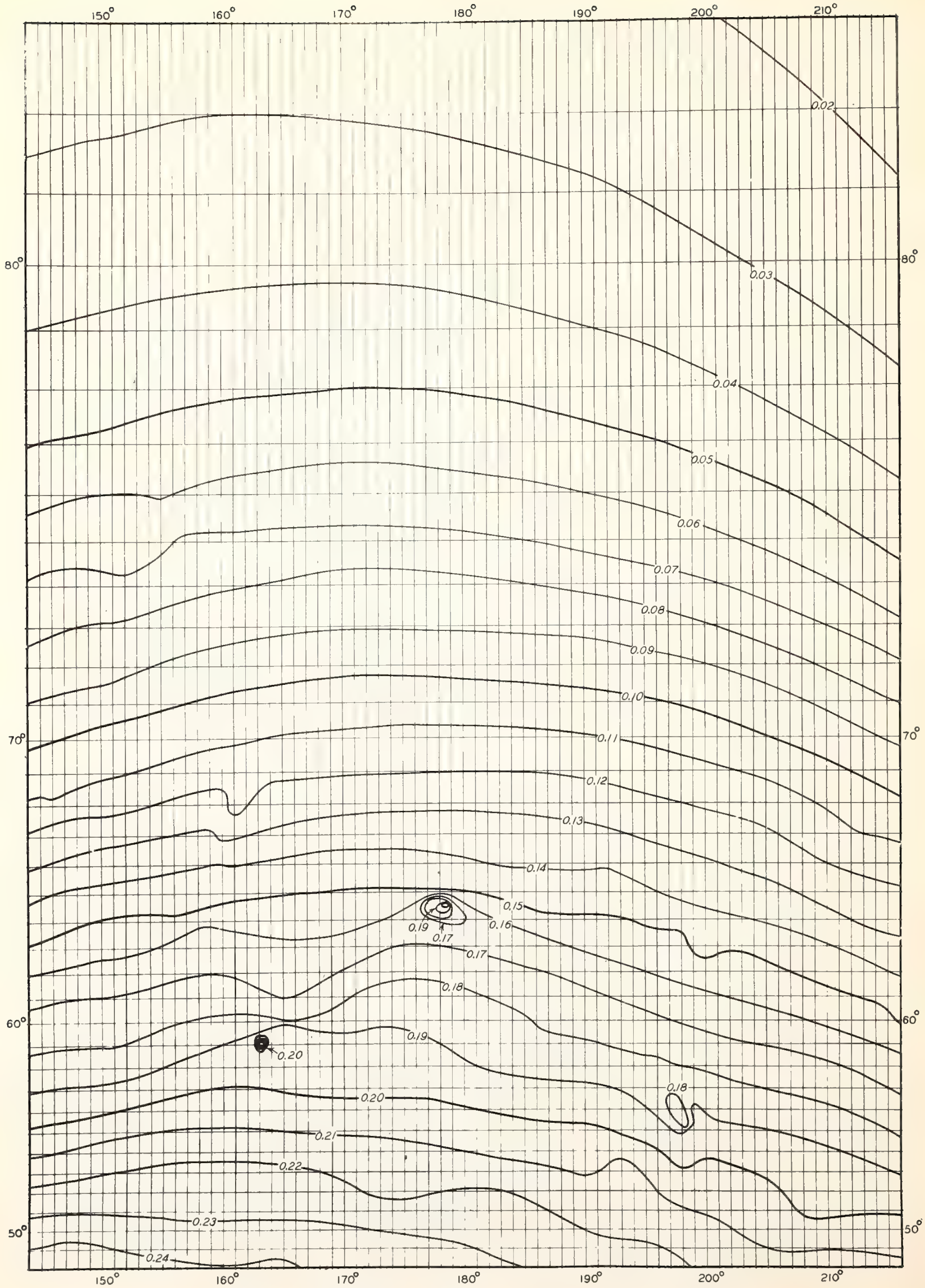

FIG. 145 (C)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

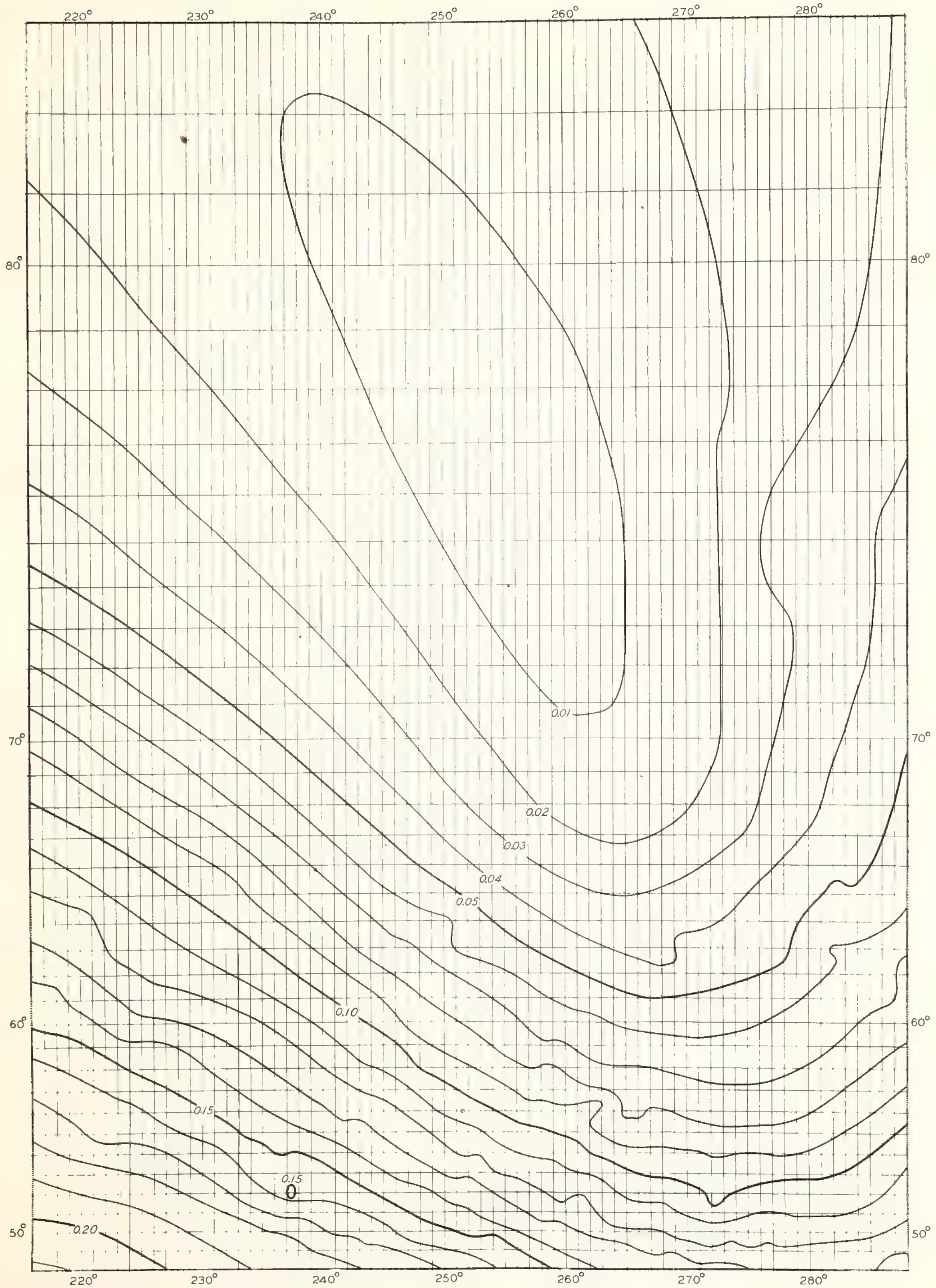

FIG. 145 (D)–THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

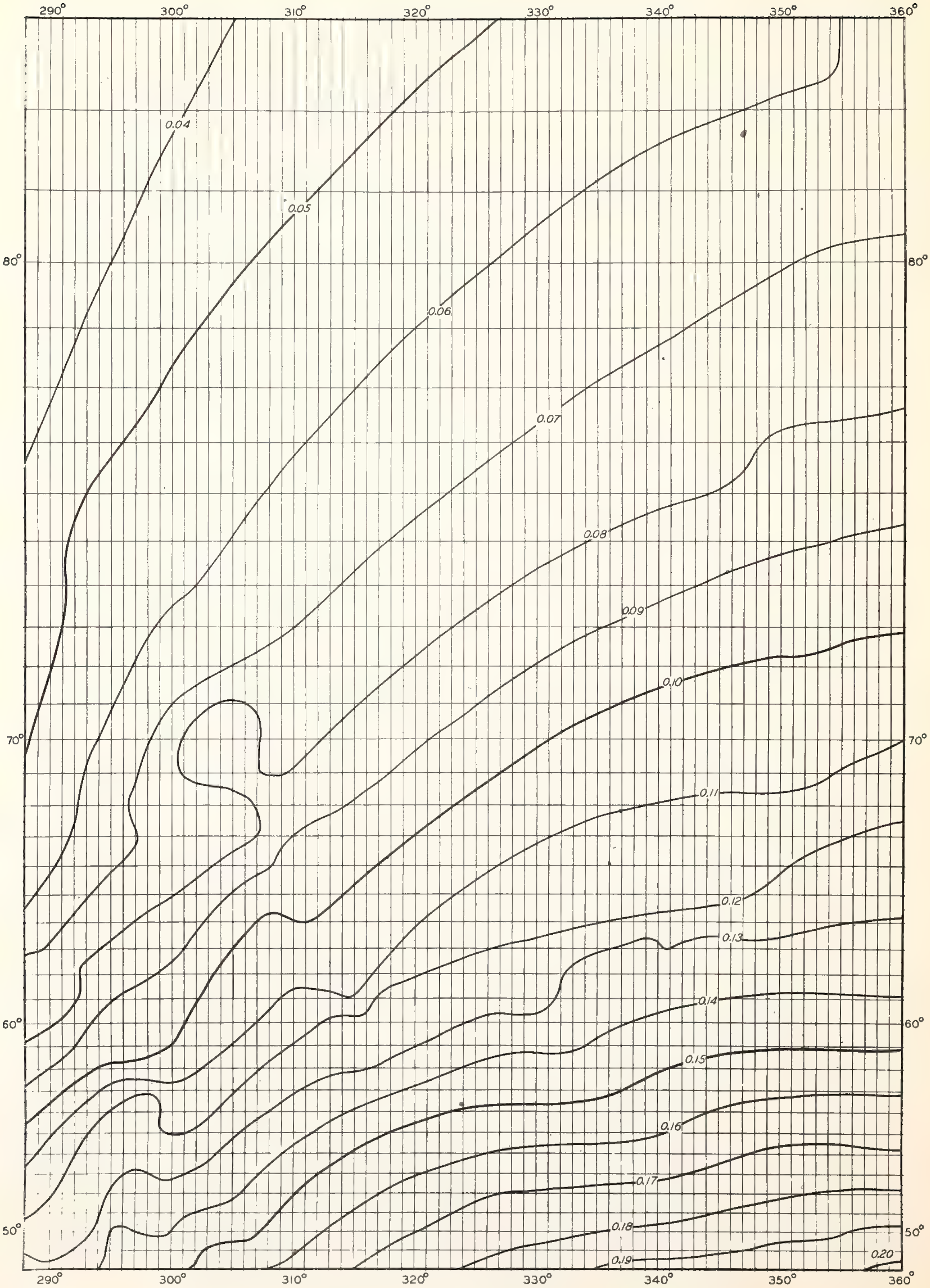

FIG. 145 (E)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

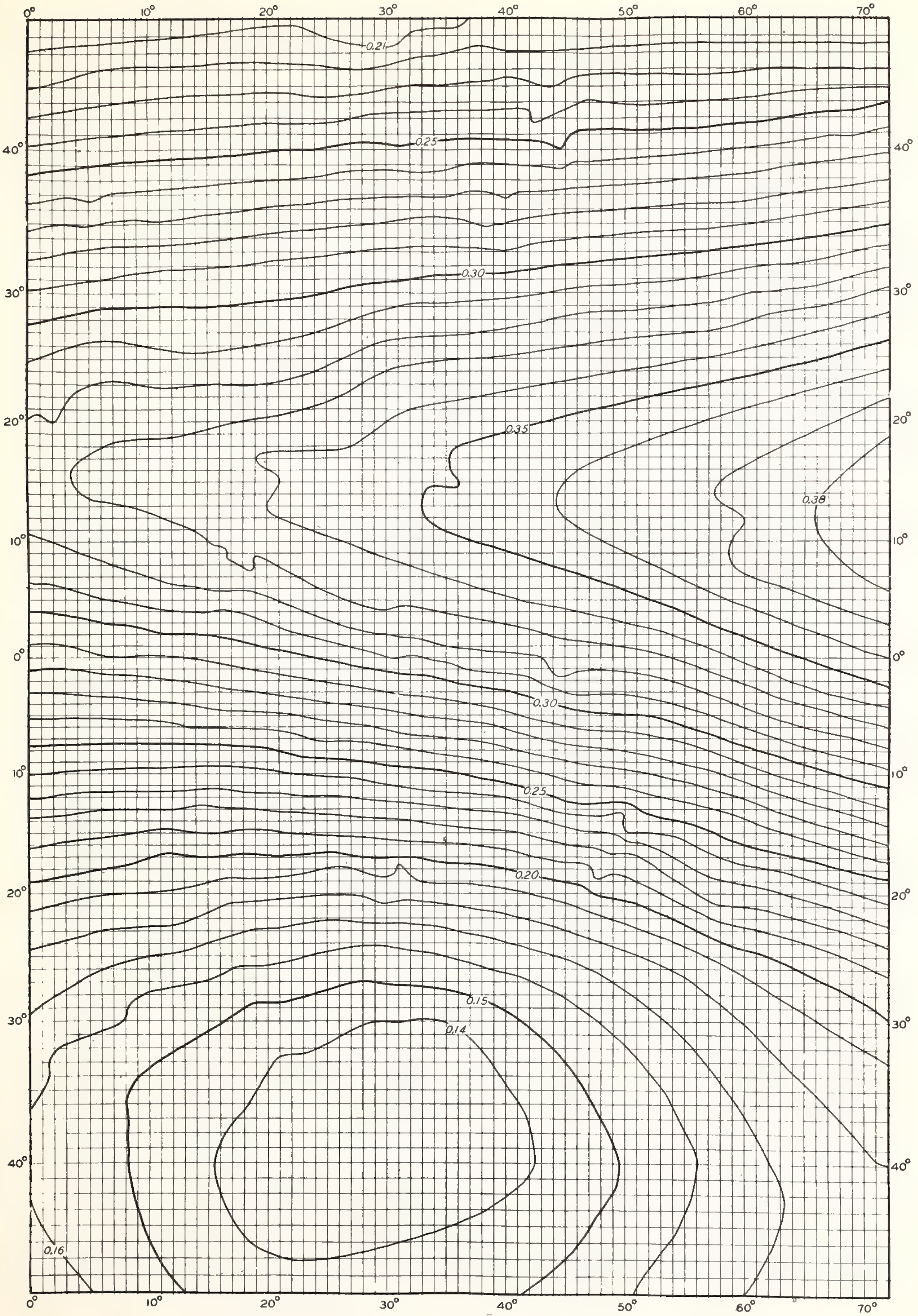

FIG. 145 (F)–THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

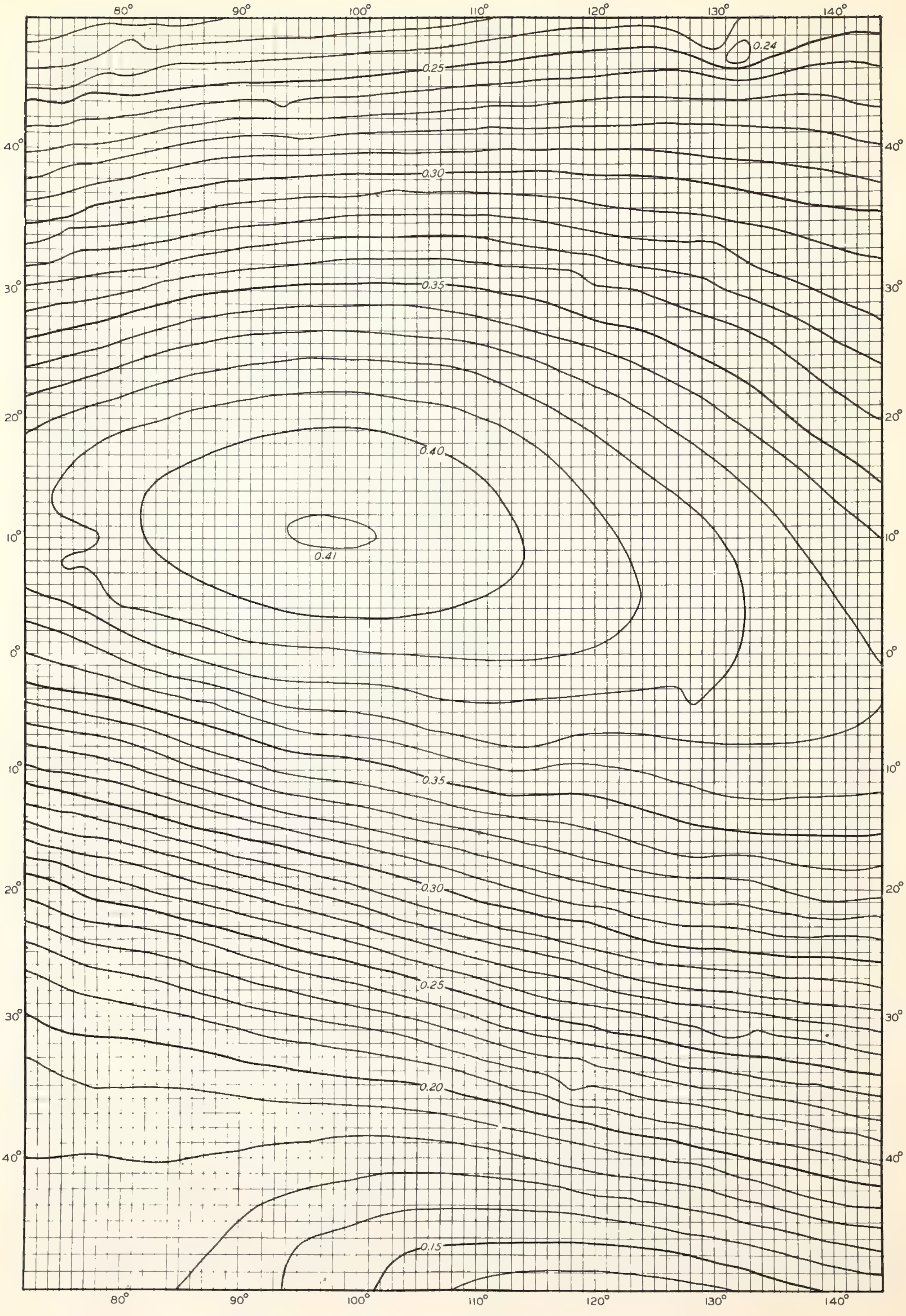

FIG. 145 (G)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

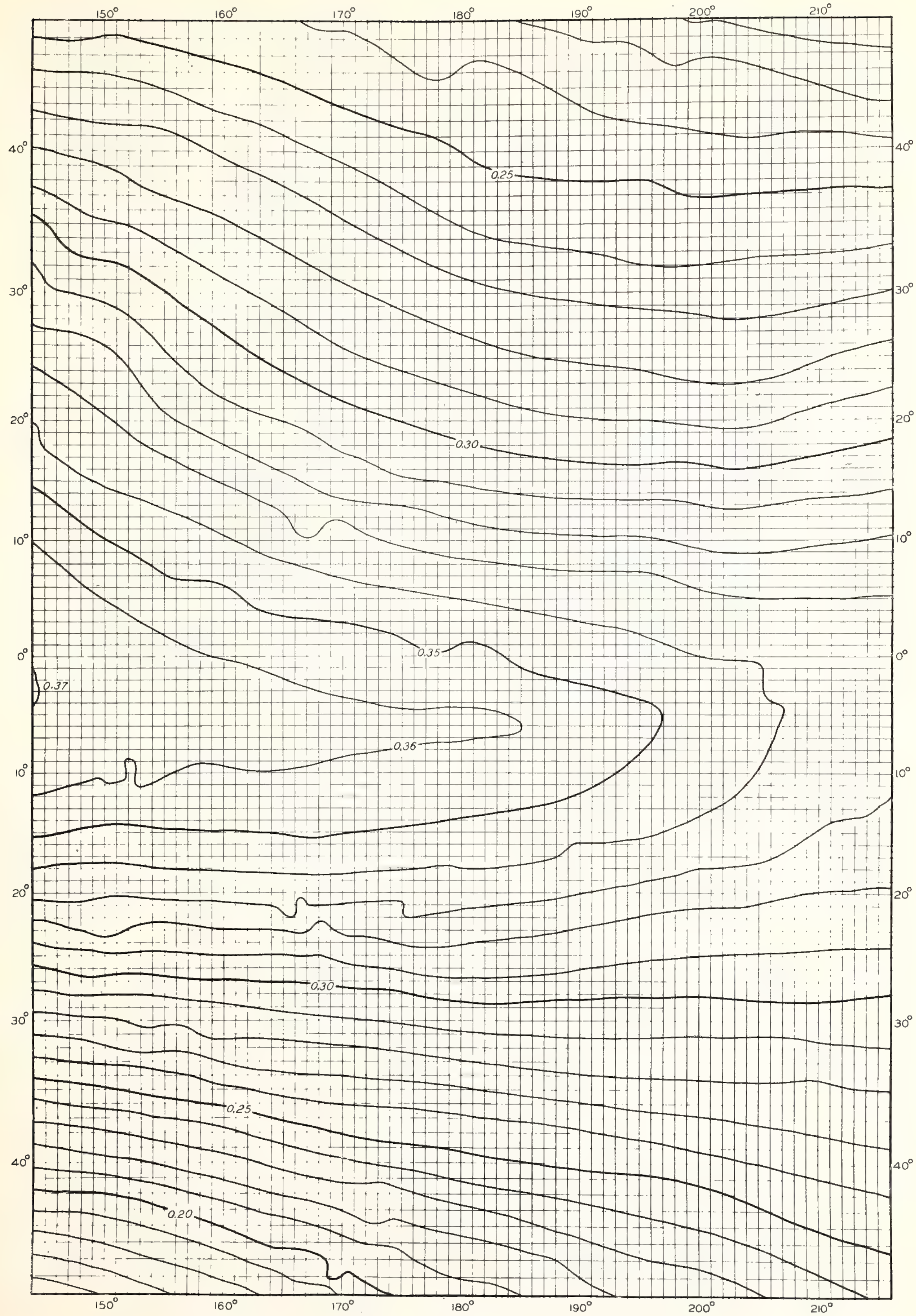

FIG. 145 (H)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

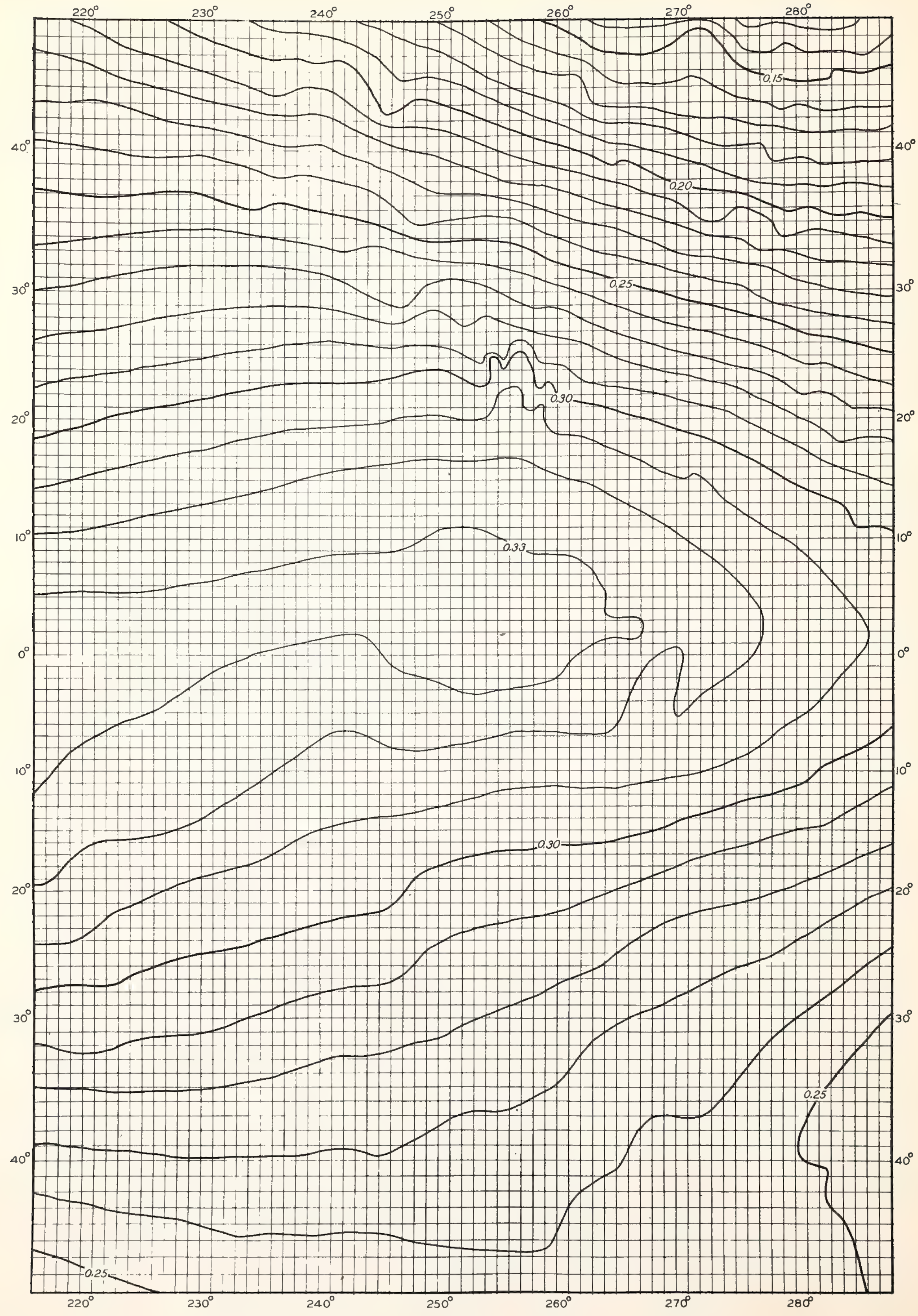

FIG. 145 (I)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

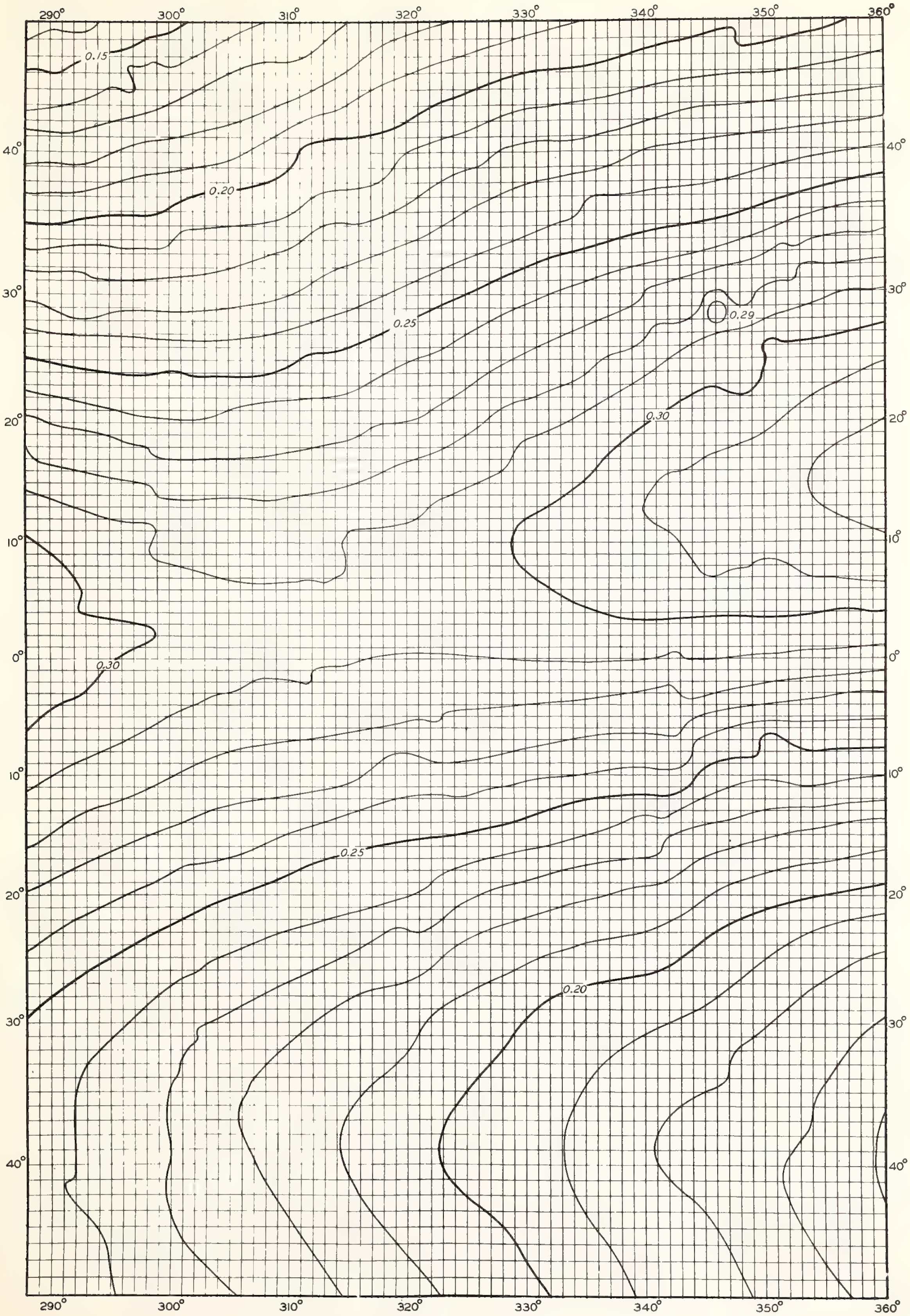

FIG. 145 (J)-THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

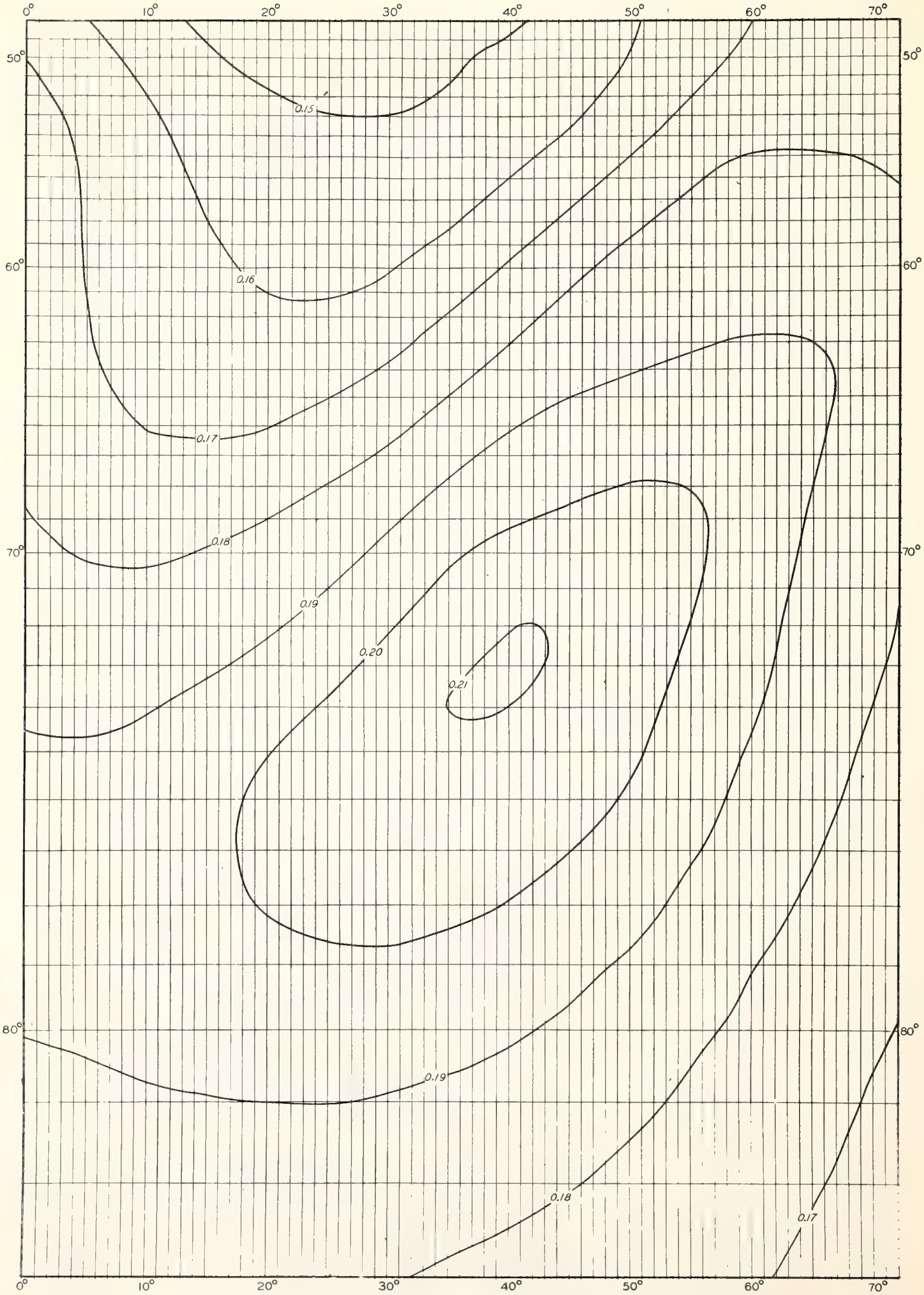

FIG. 145 (K)-THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

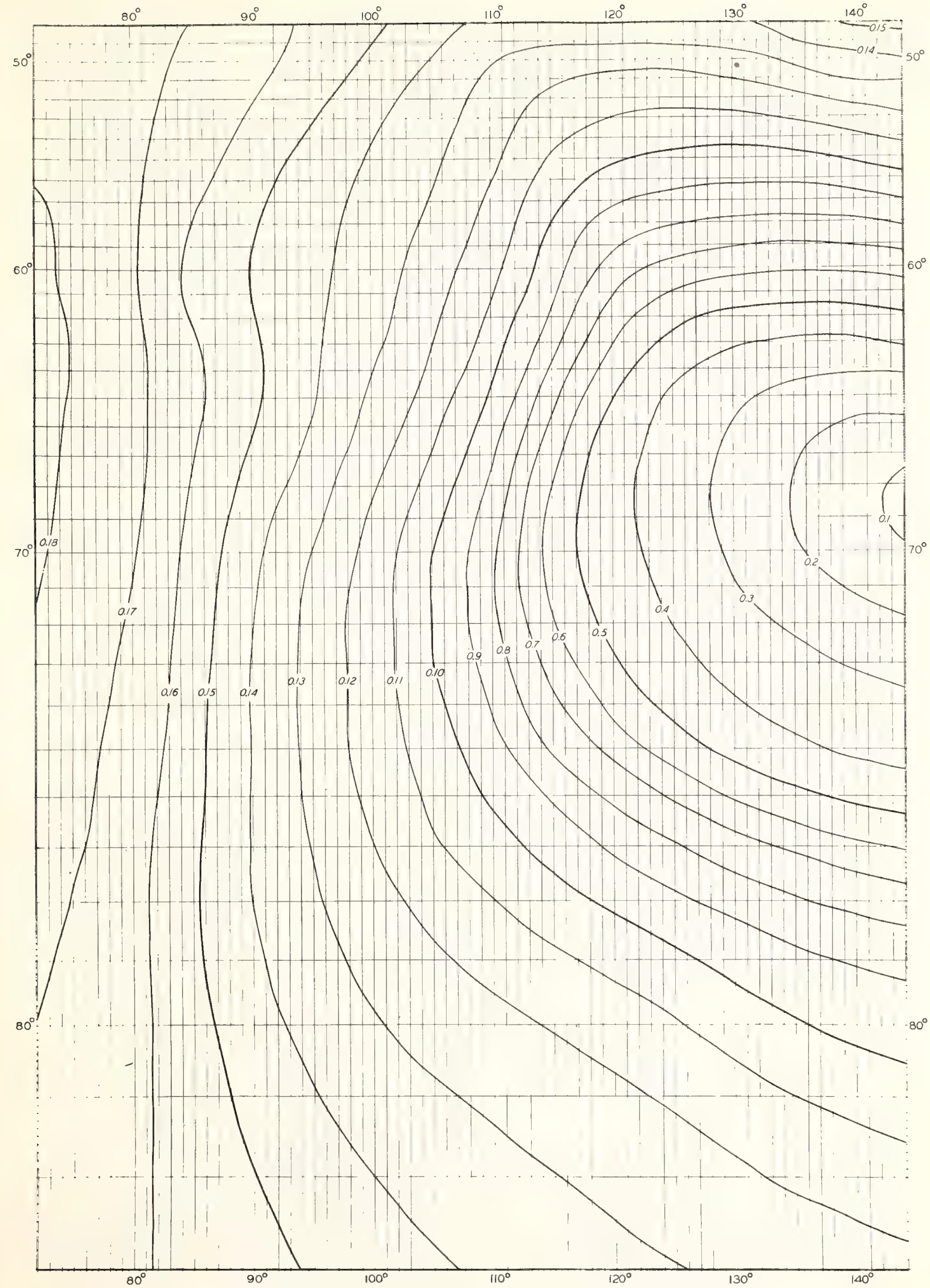

FIG. 145 (L)–THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

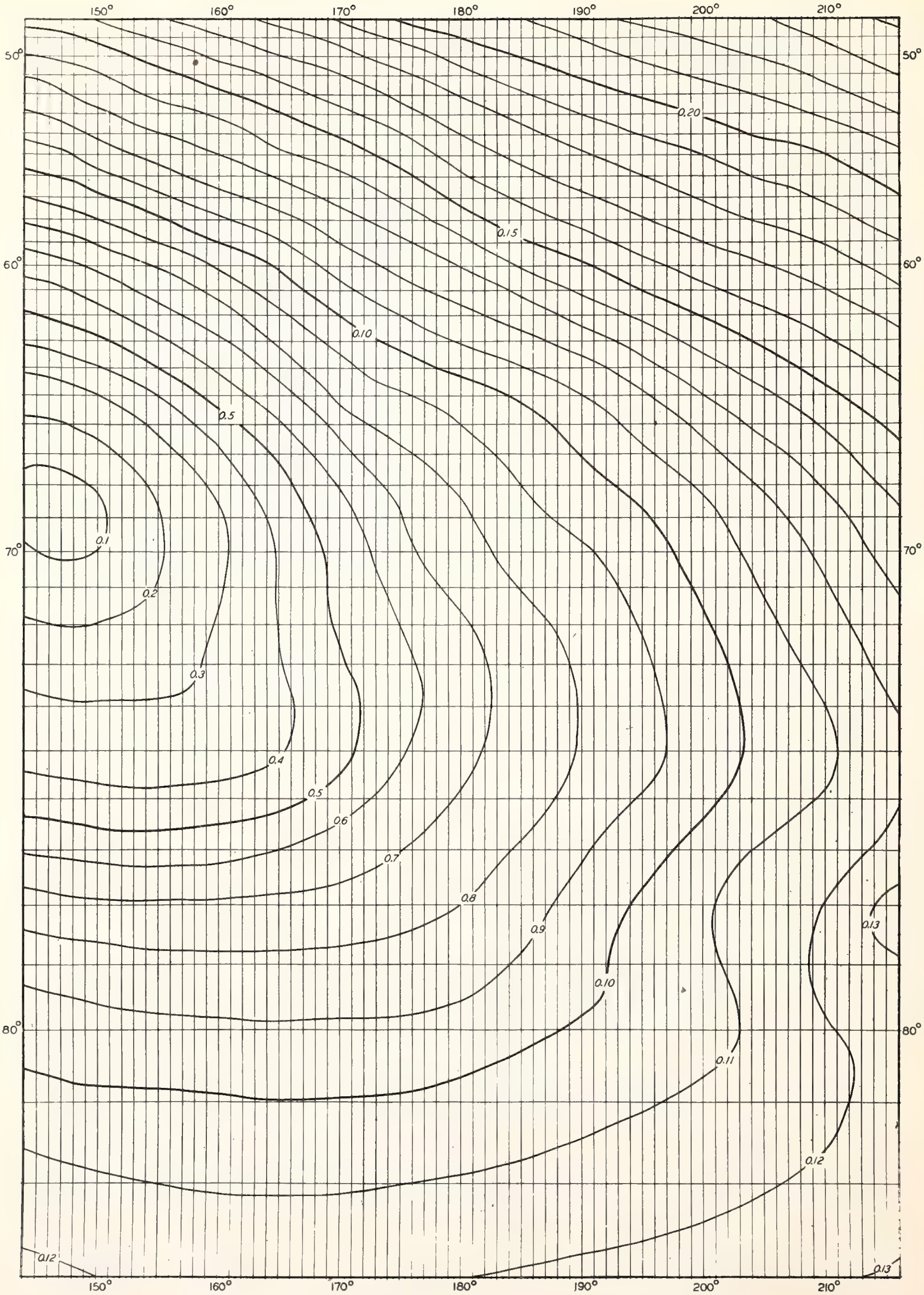

FIG. 145 (M)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

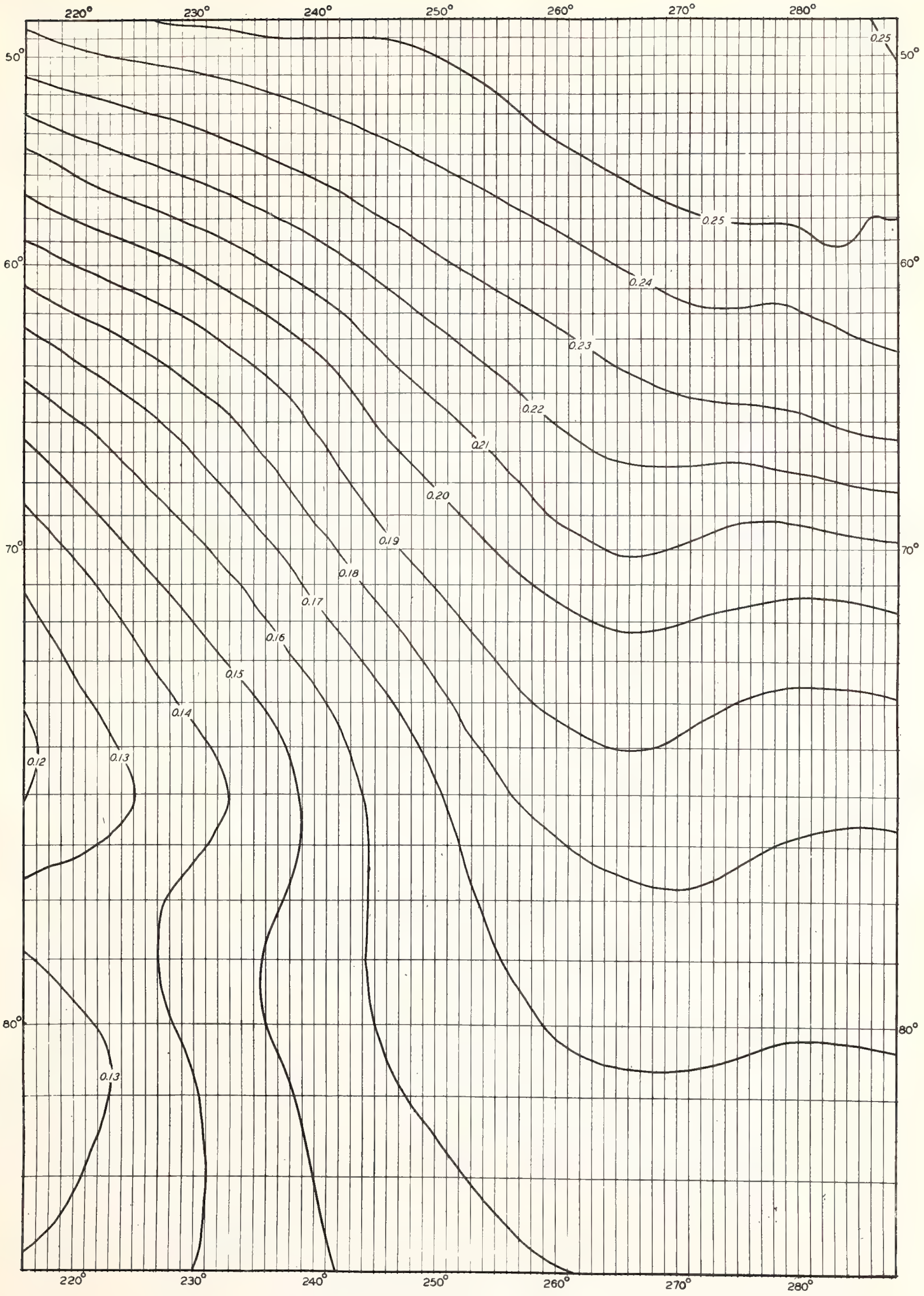

FIG. 145 (N)–THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR **1945**

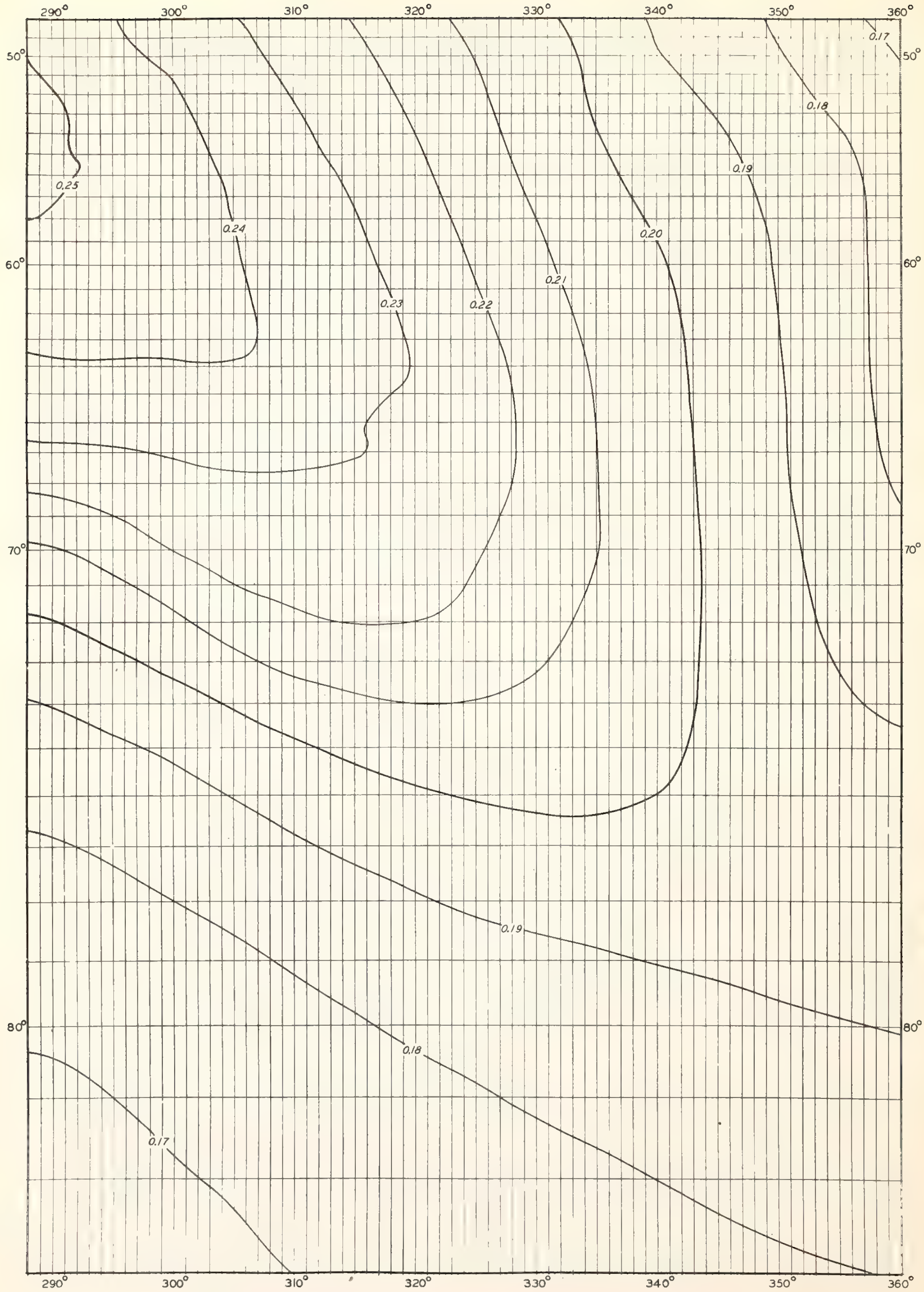

FIG. 145 (O)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945

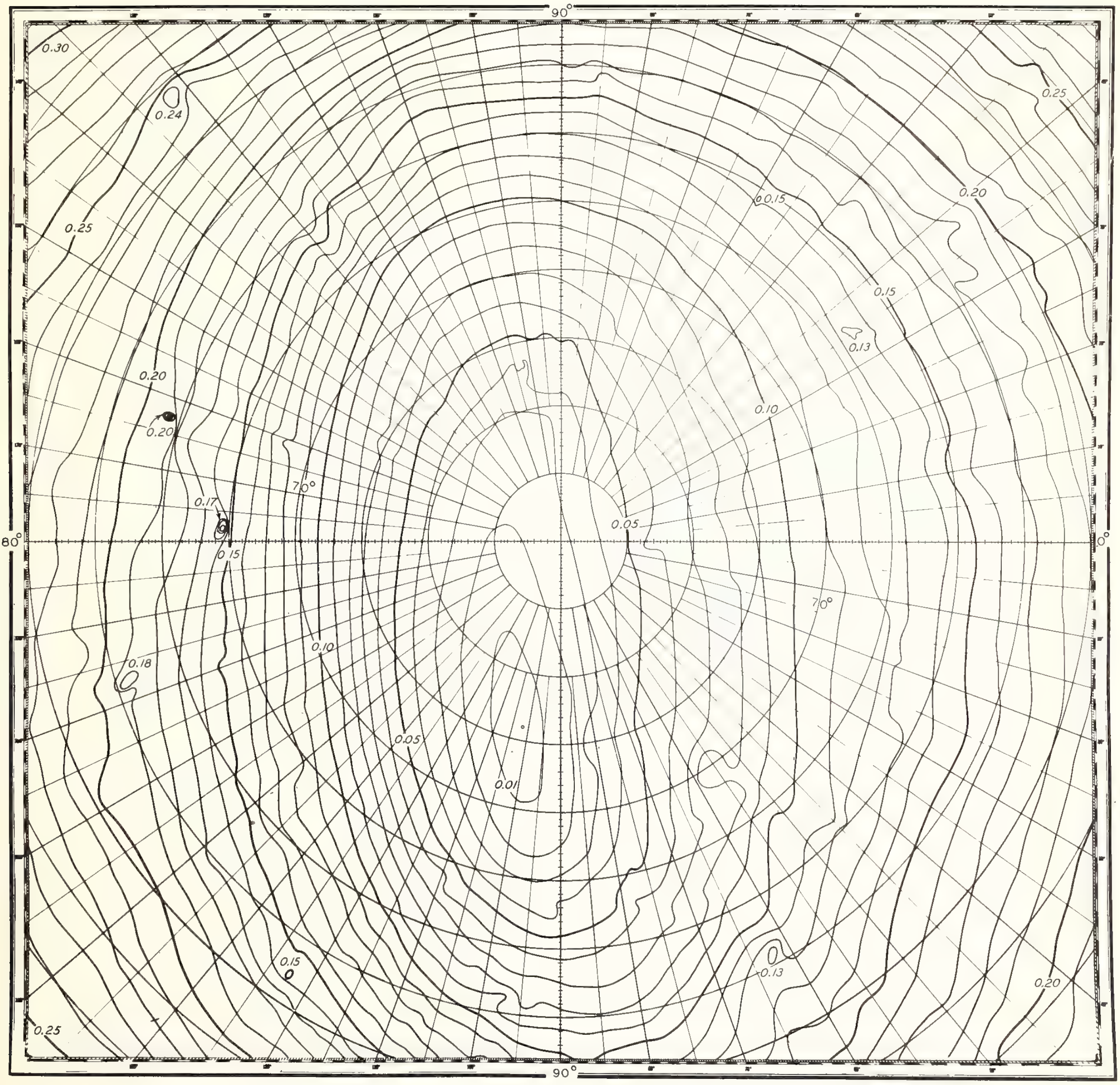

FIG. 145 (P)—THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945, NORTH POLAR REGION

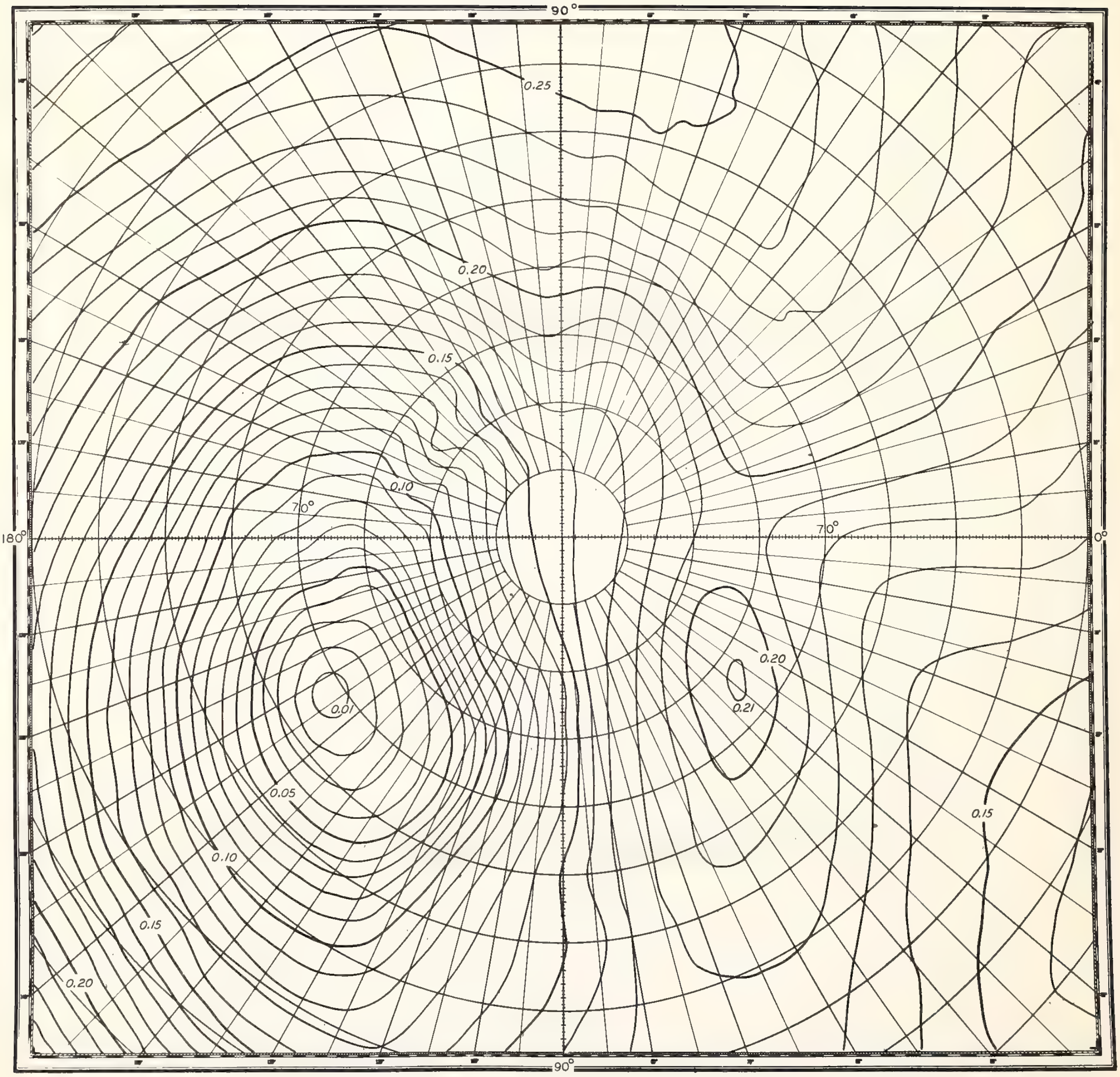

FIG. 145 (Q)–THE GEOMAGNETIC HORIZONTAL INTENSITY IN CGS-UNIT FOR 1945, SOUTH POLAR REGION

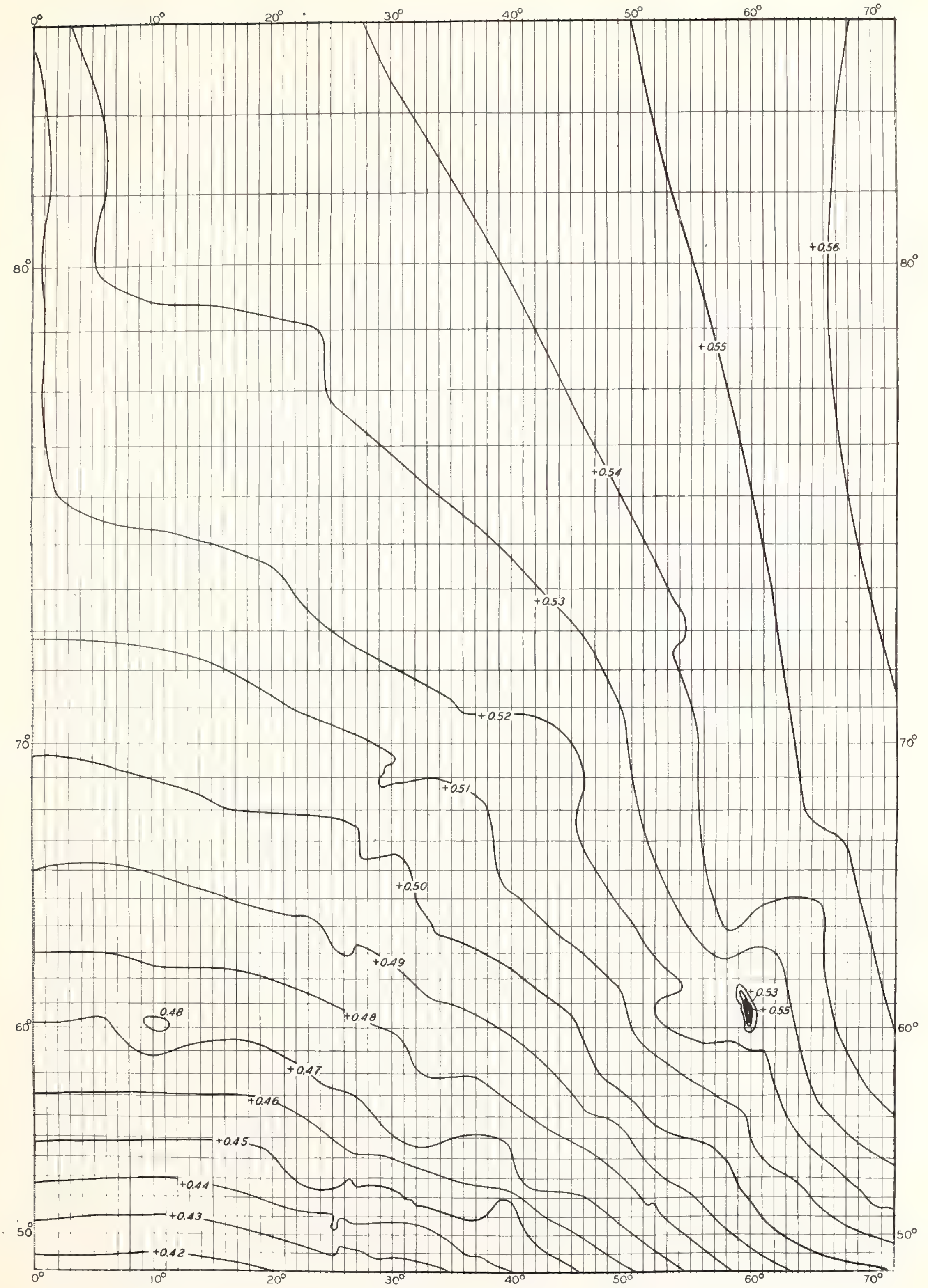

FIG. 146(A)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

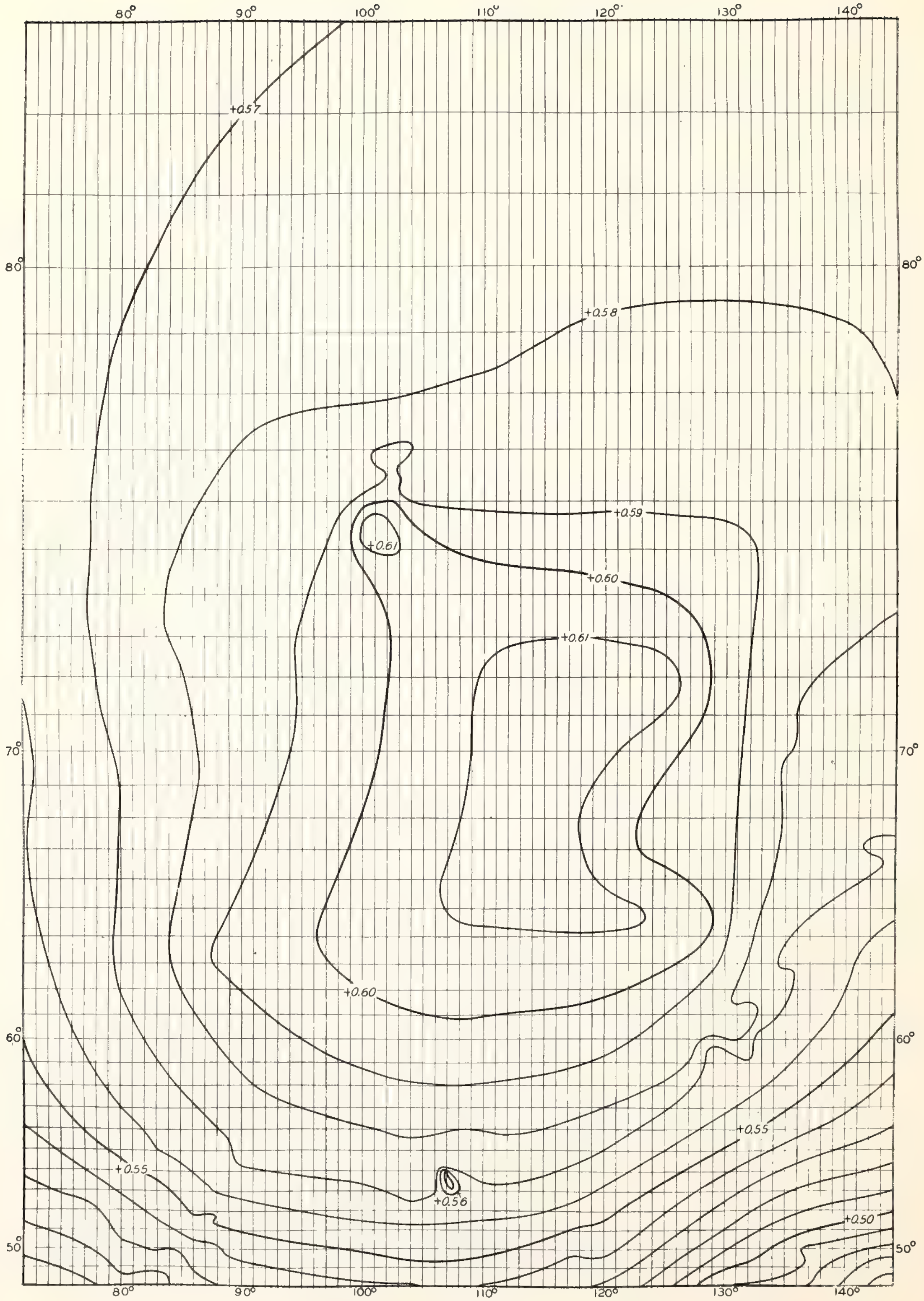

FIG. 146(B)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

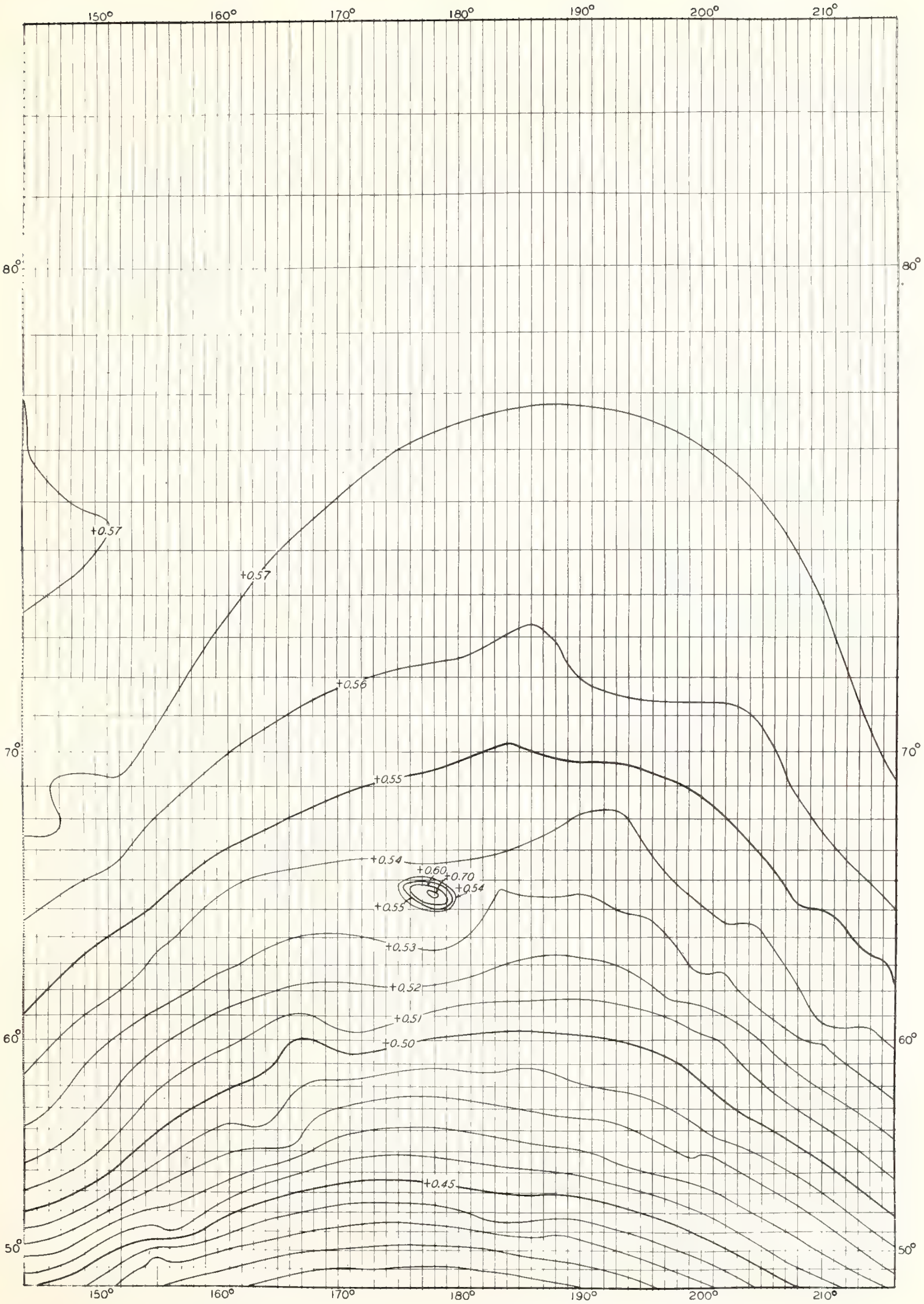

FIG. 146(C)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

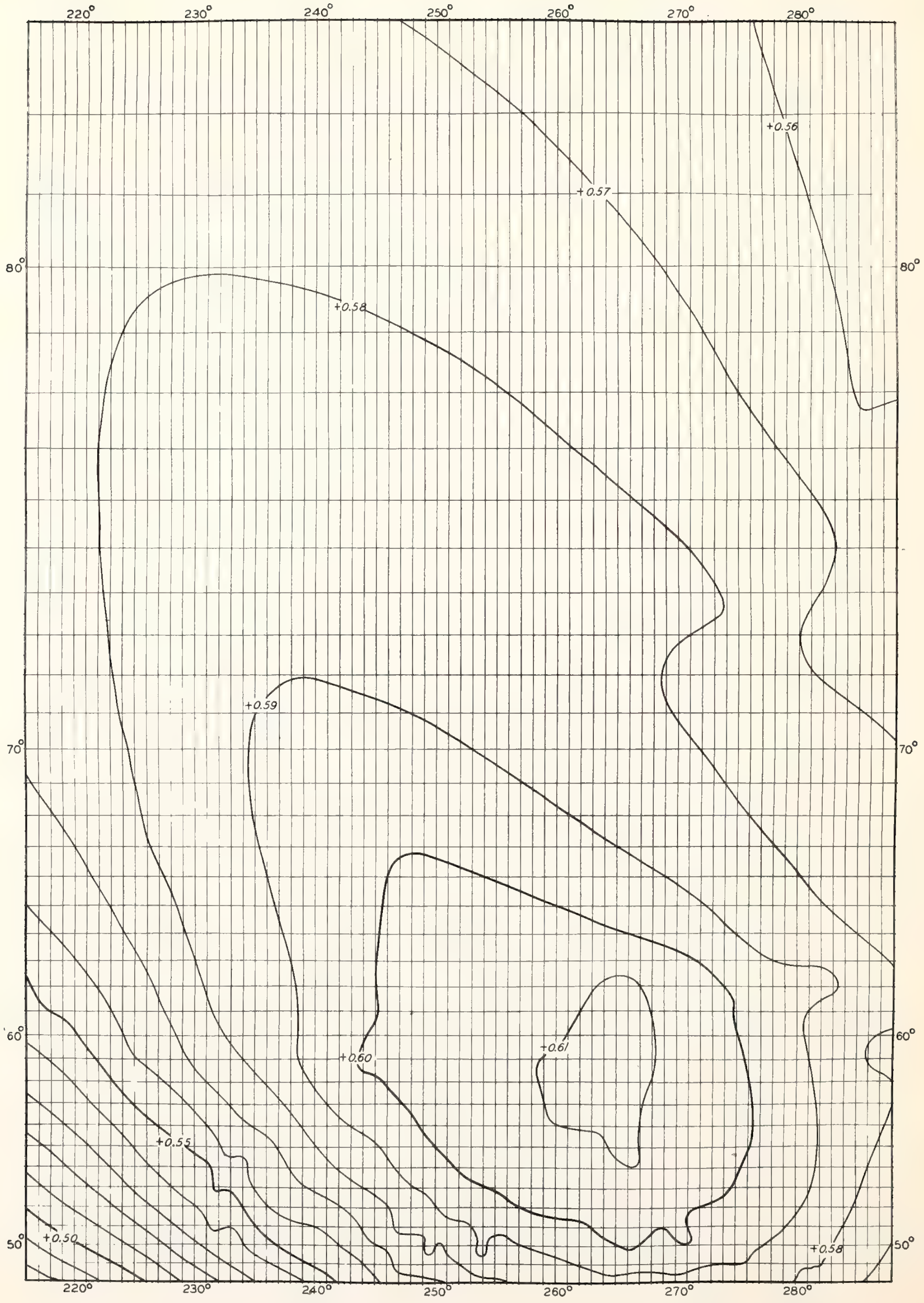

FIG. 146(D)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

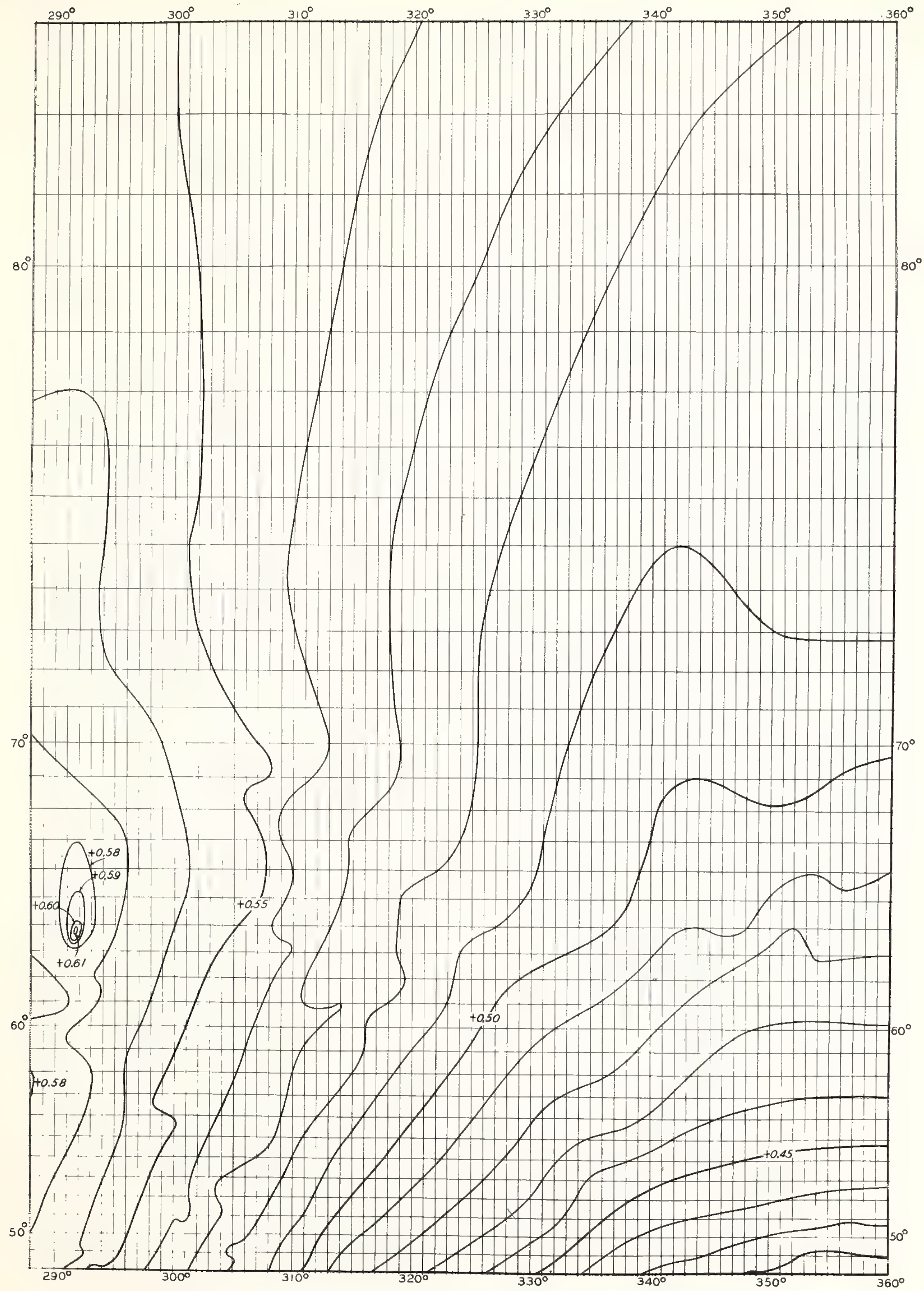

FIG. 146(E) — THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

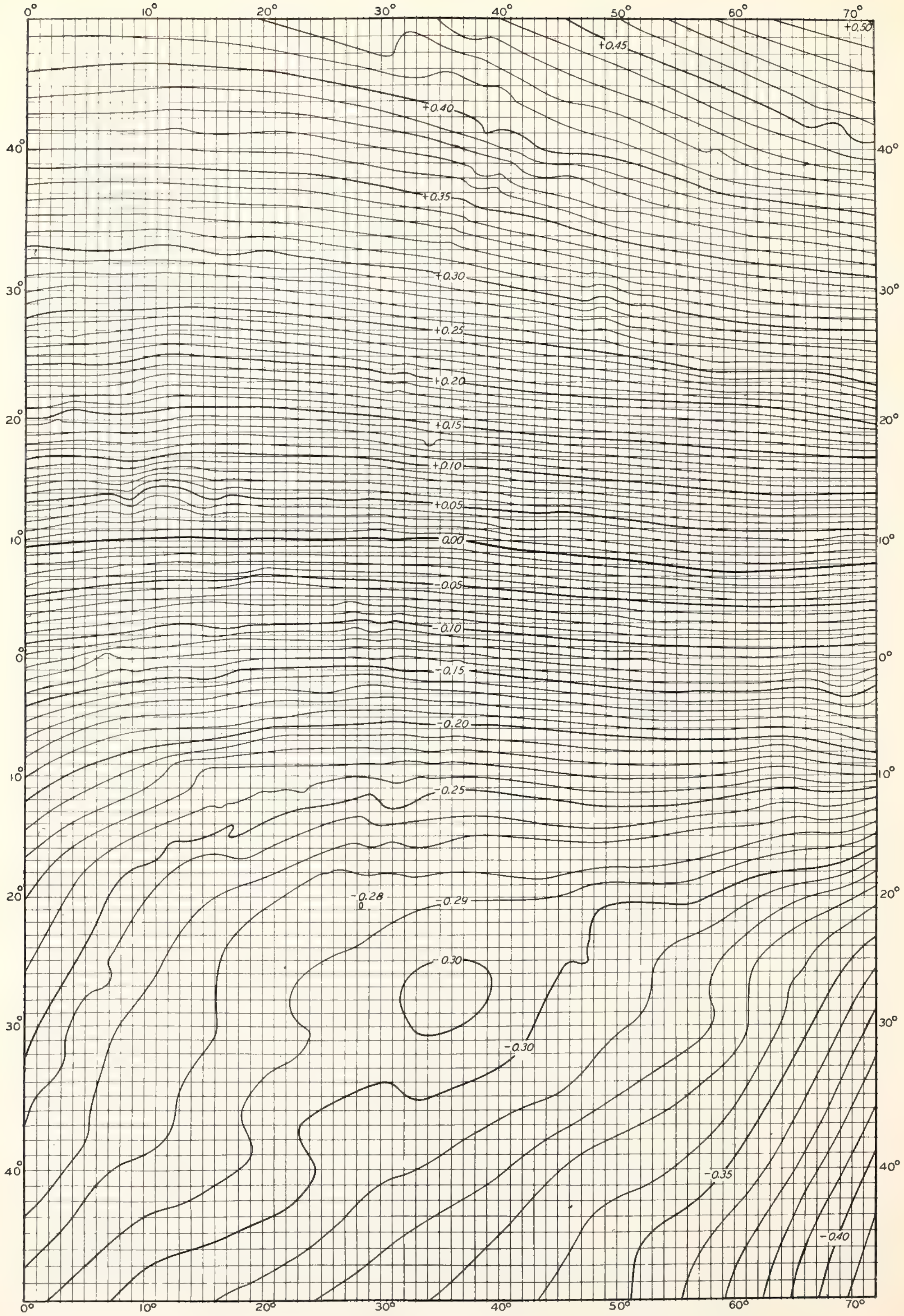

FIG. 146(F)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

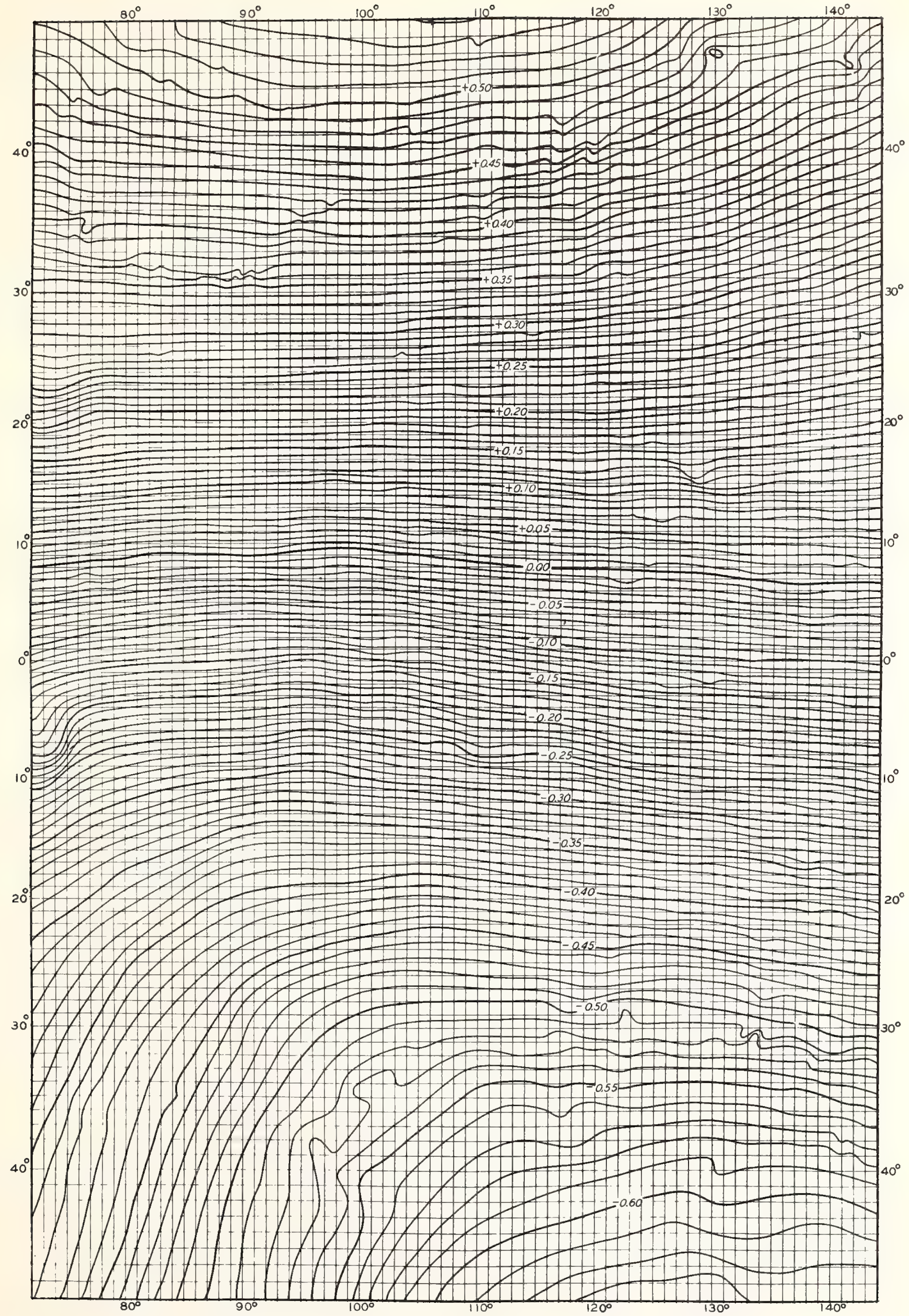

FIG. 146(G)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

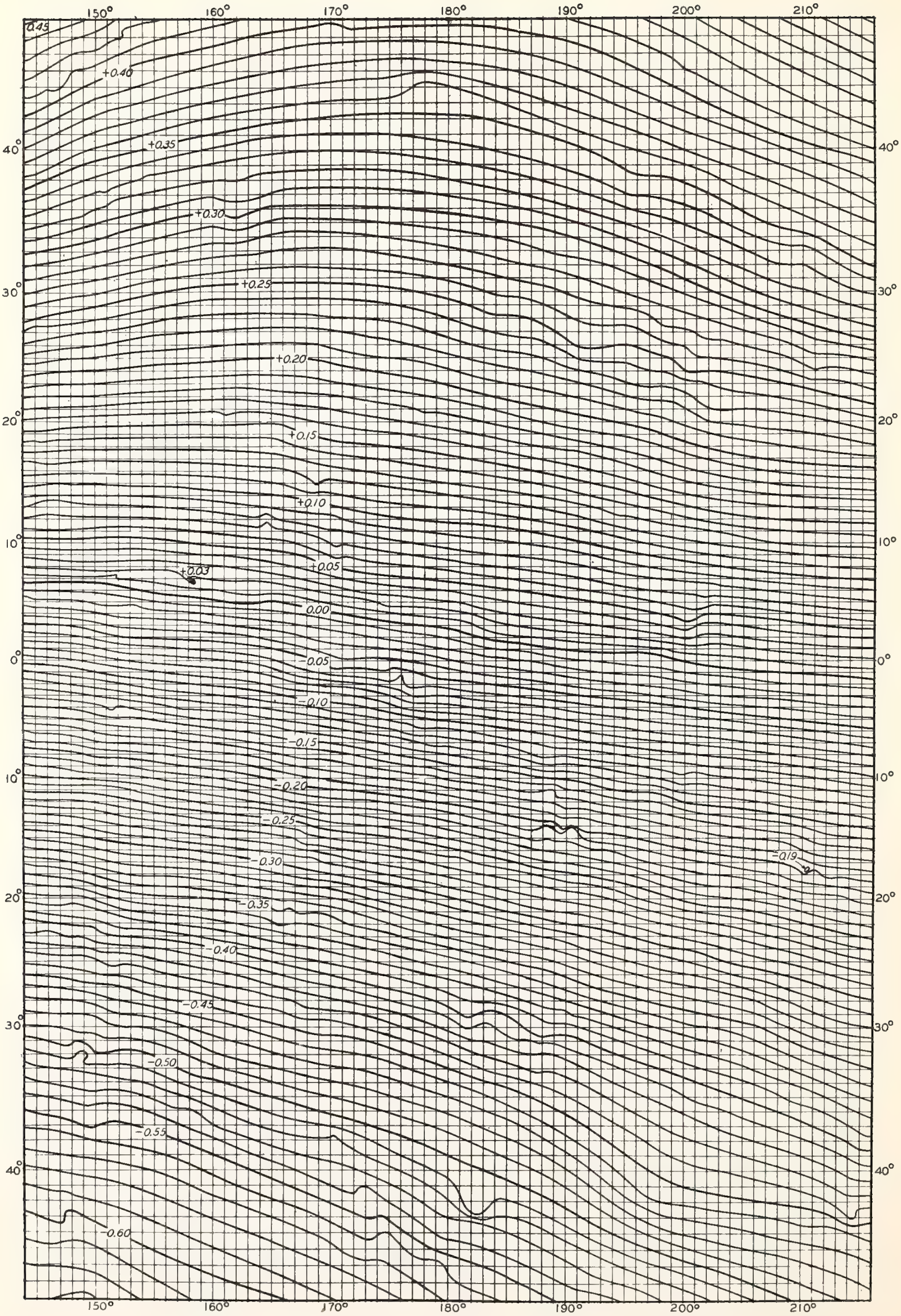

FIG. 146(H)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

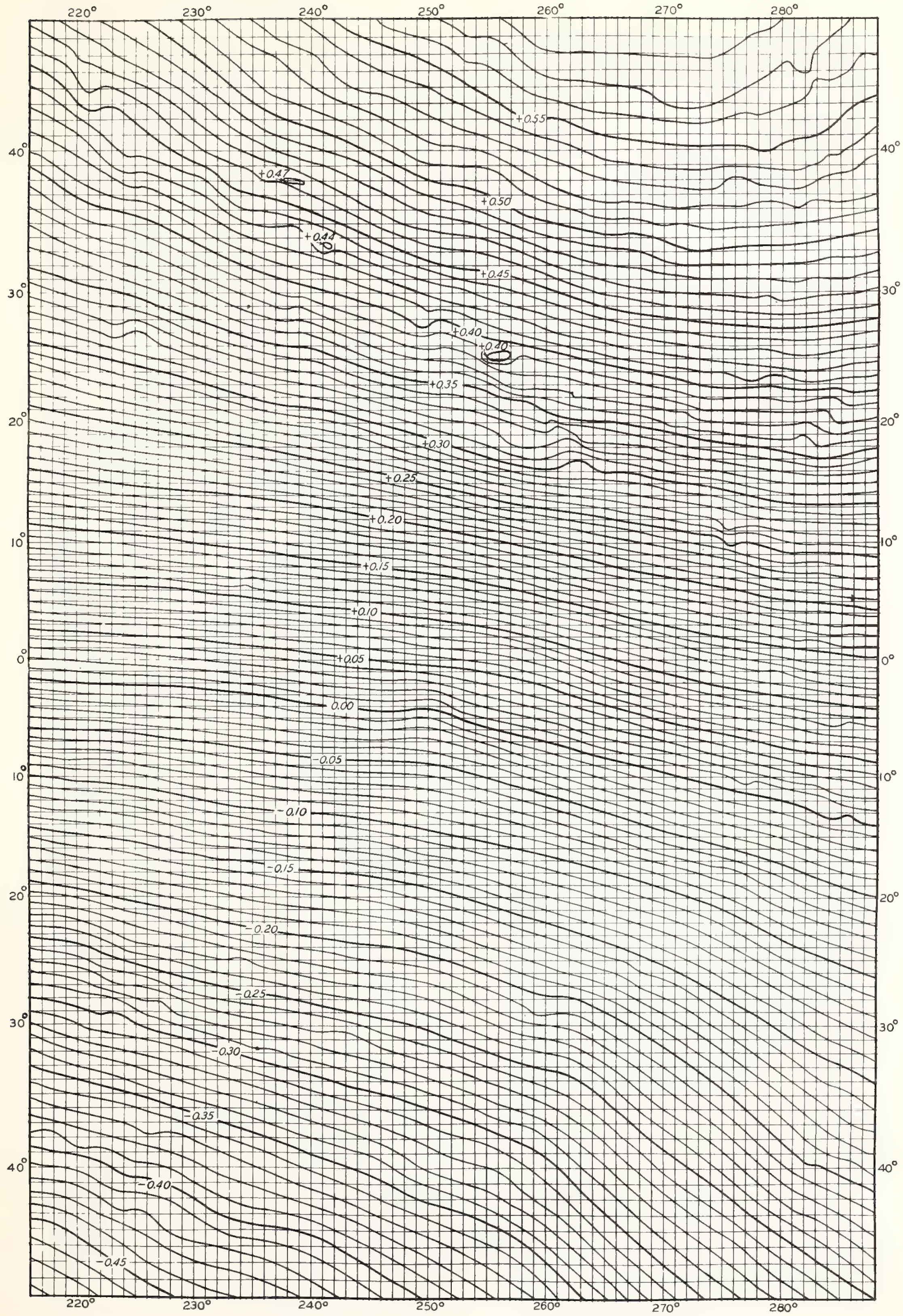

FIG. 146(l)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

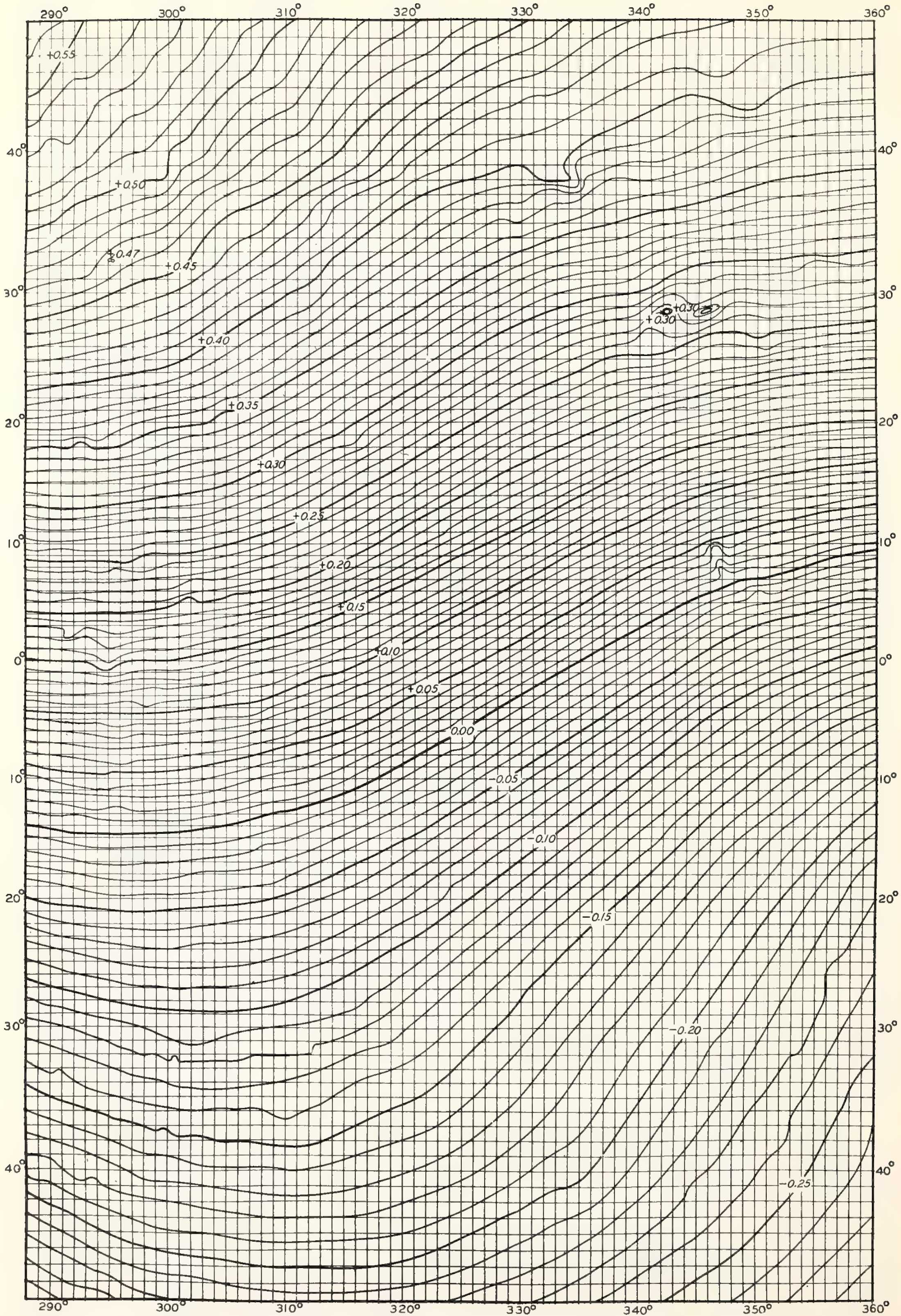

FIG. 146(J)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

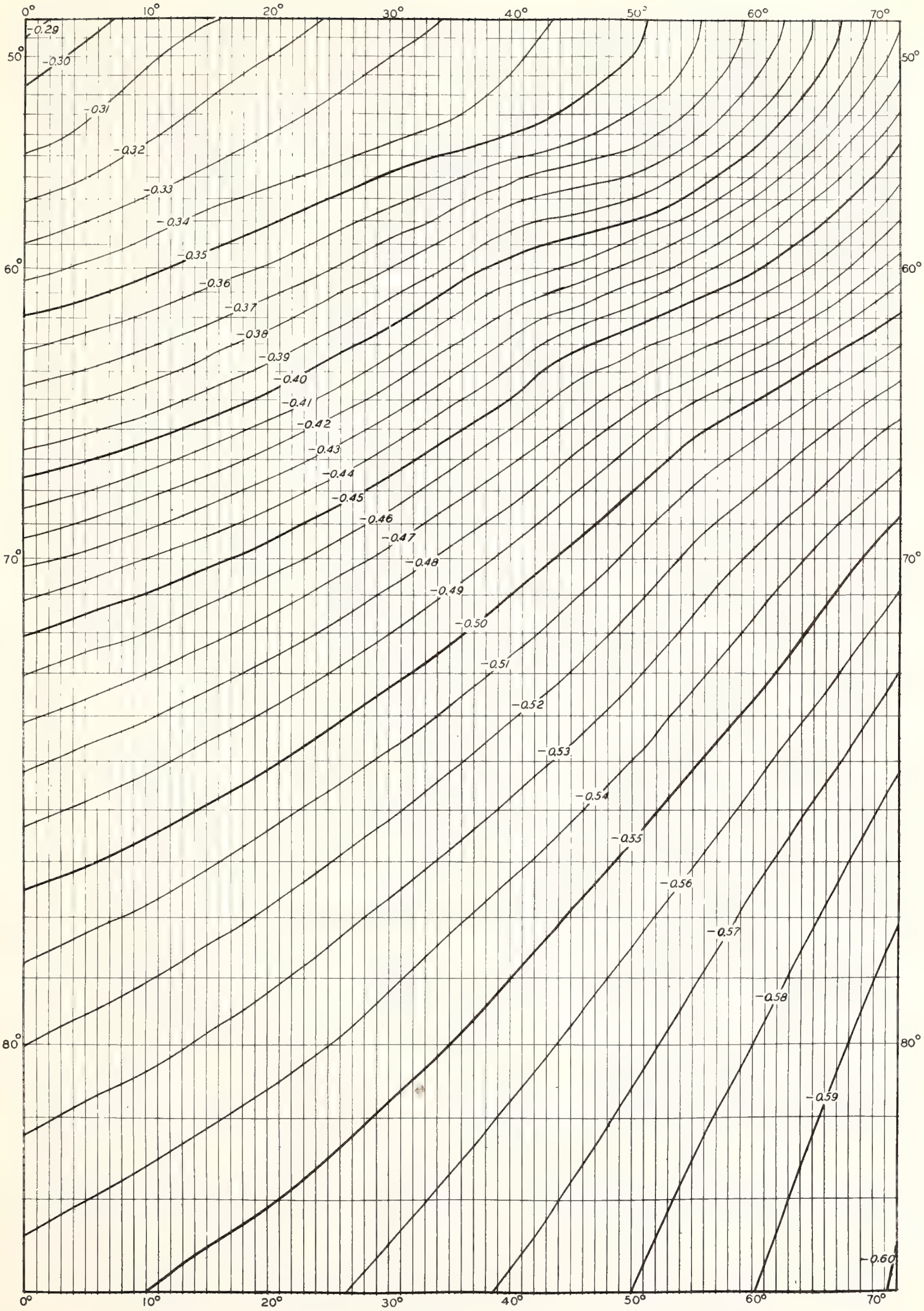

FIG. 146(K)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

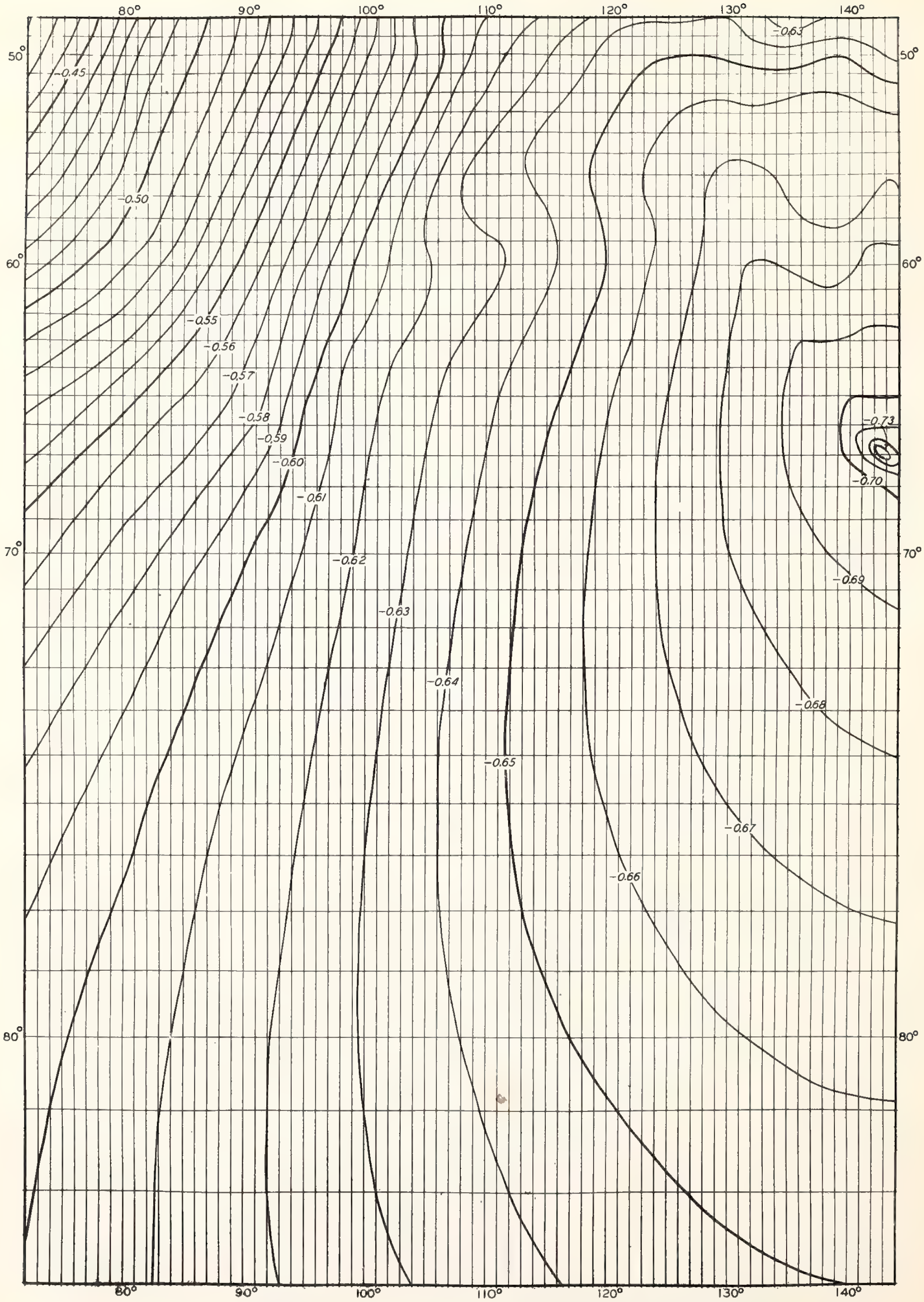

FIG. 146(L)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

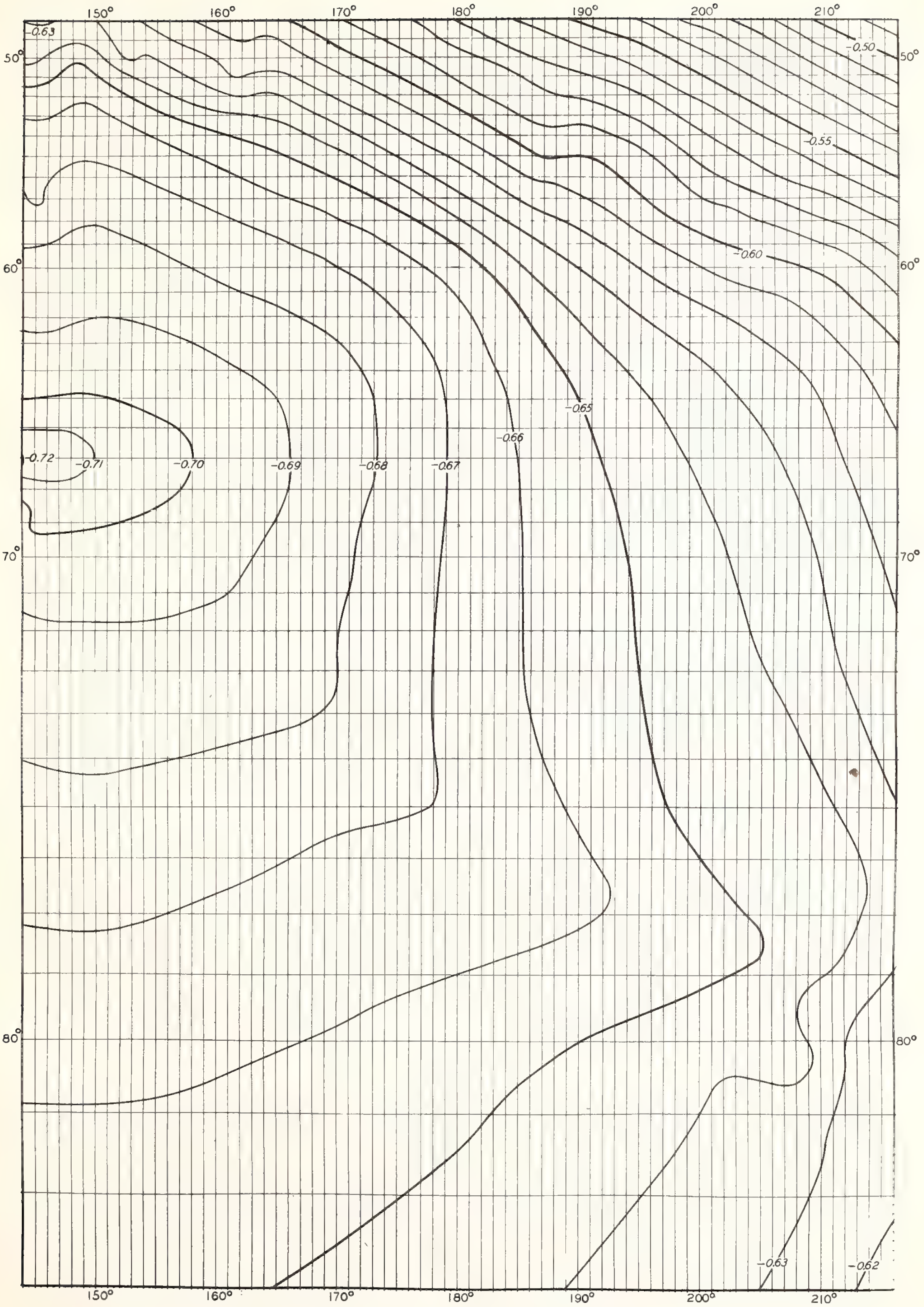

FIG. 146(M)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

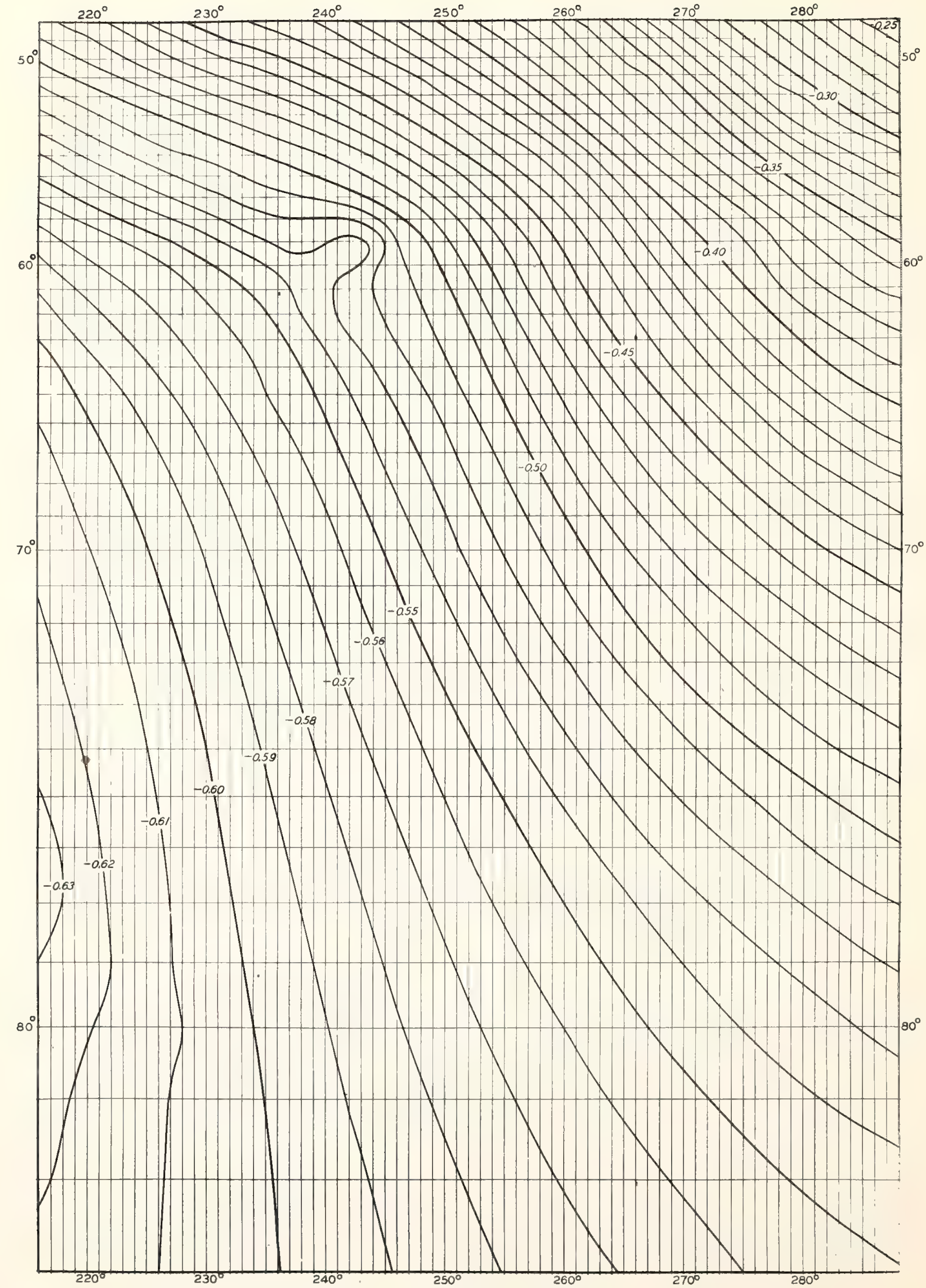

FIG. 146(N)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

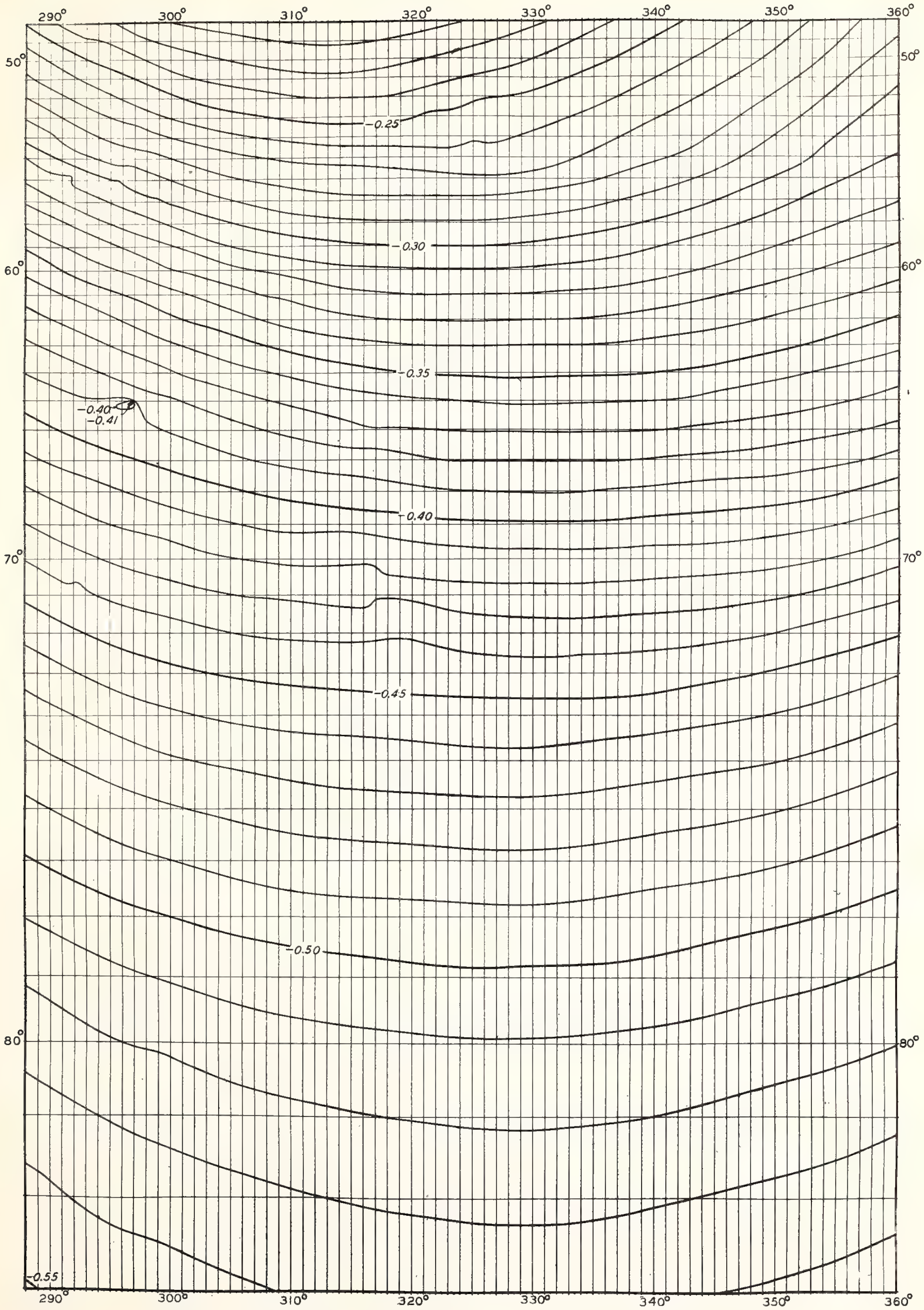

FIG. 146(O)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945

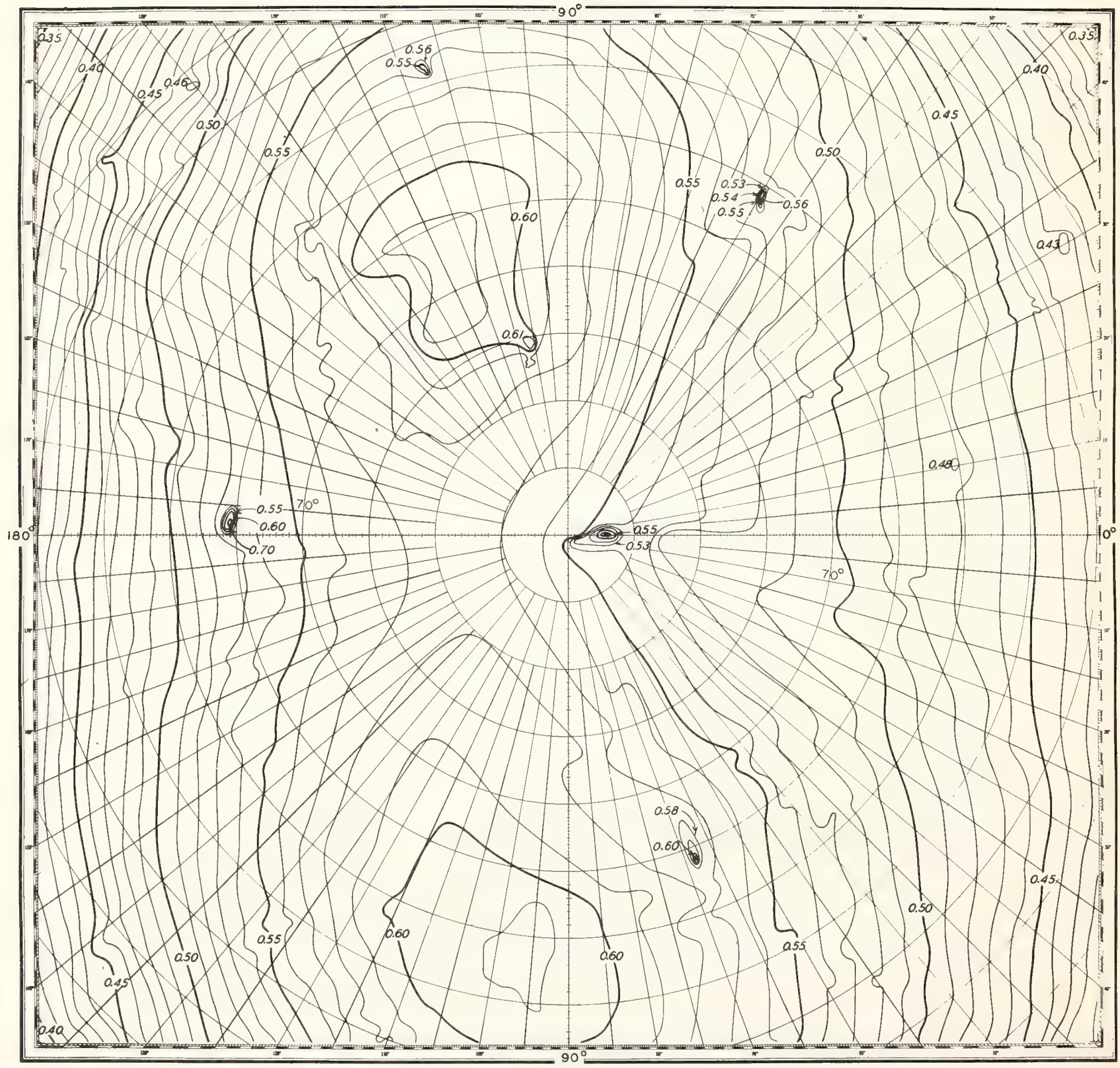

FIG. 146(P)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945, NORTH POLAR REGION

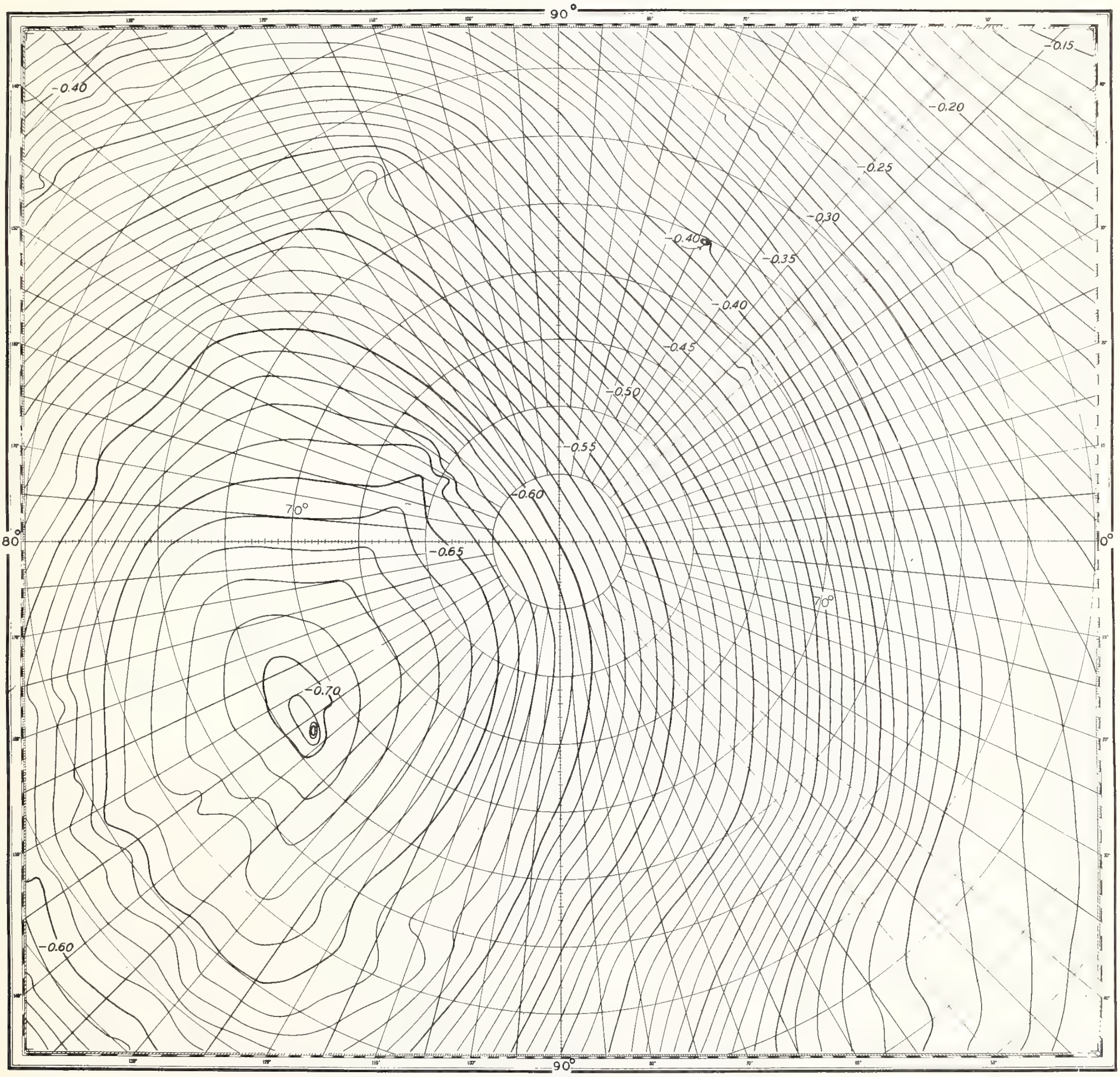

FIG. 146(Q)—THE GEOMAGNETIC VERTICAL INTENSITY IN CGS-UNIT FOR 1945, SOUTH POLAR REGION

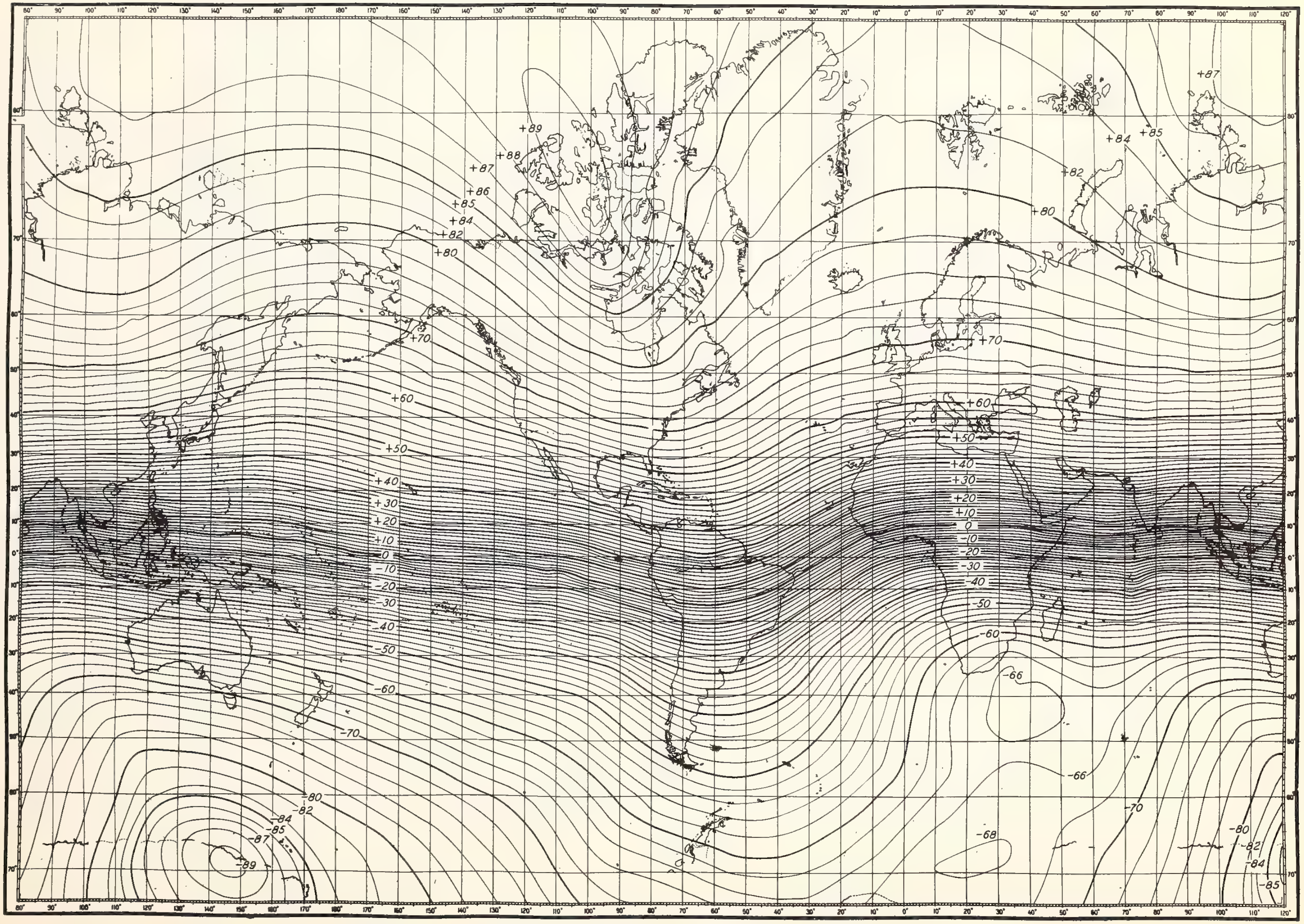

FIG. 147(A) —THE GEOMAGNETIC INCLINATION IN DEGREES OF ARC FOR 1945

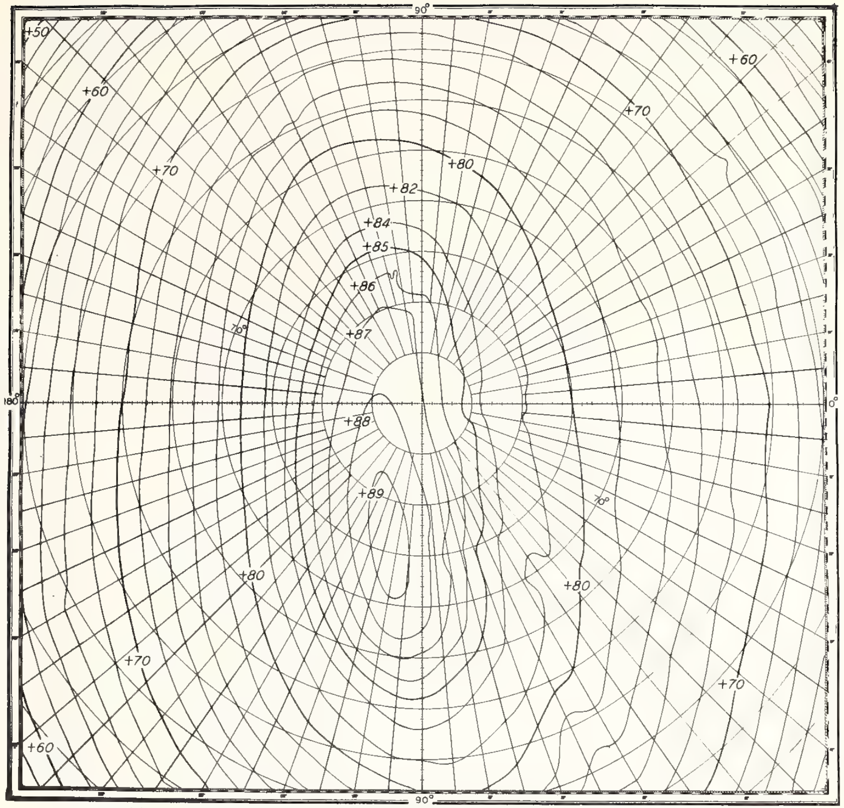

FIG. 147(B)—THE GEOMAGNETIC INCLINATION IN DEGREES OF ARC FOR 1945, NORTH POLAR REGION

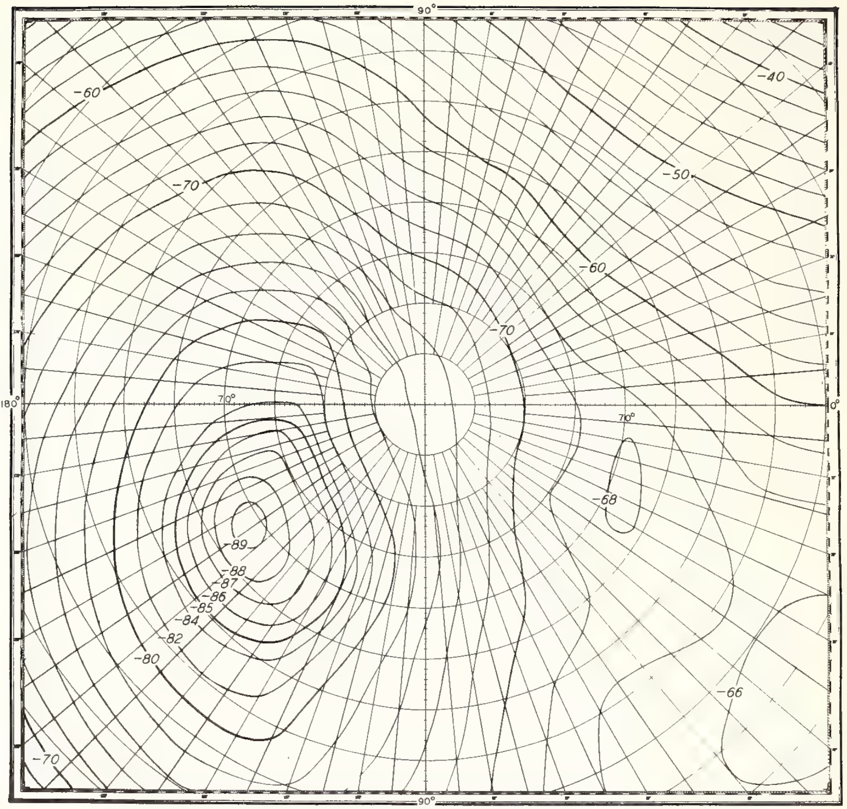

FIG. 147(C)—THE GEOMAGNETIC INCLINATION IN DEGREES OF ARC FOR 1945, SOUTH POLAR REGION

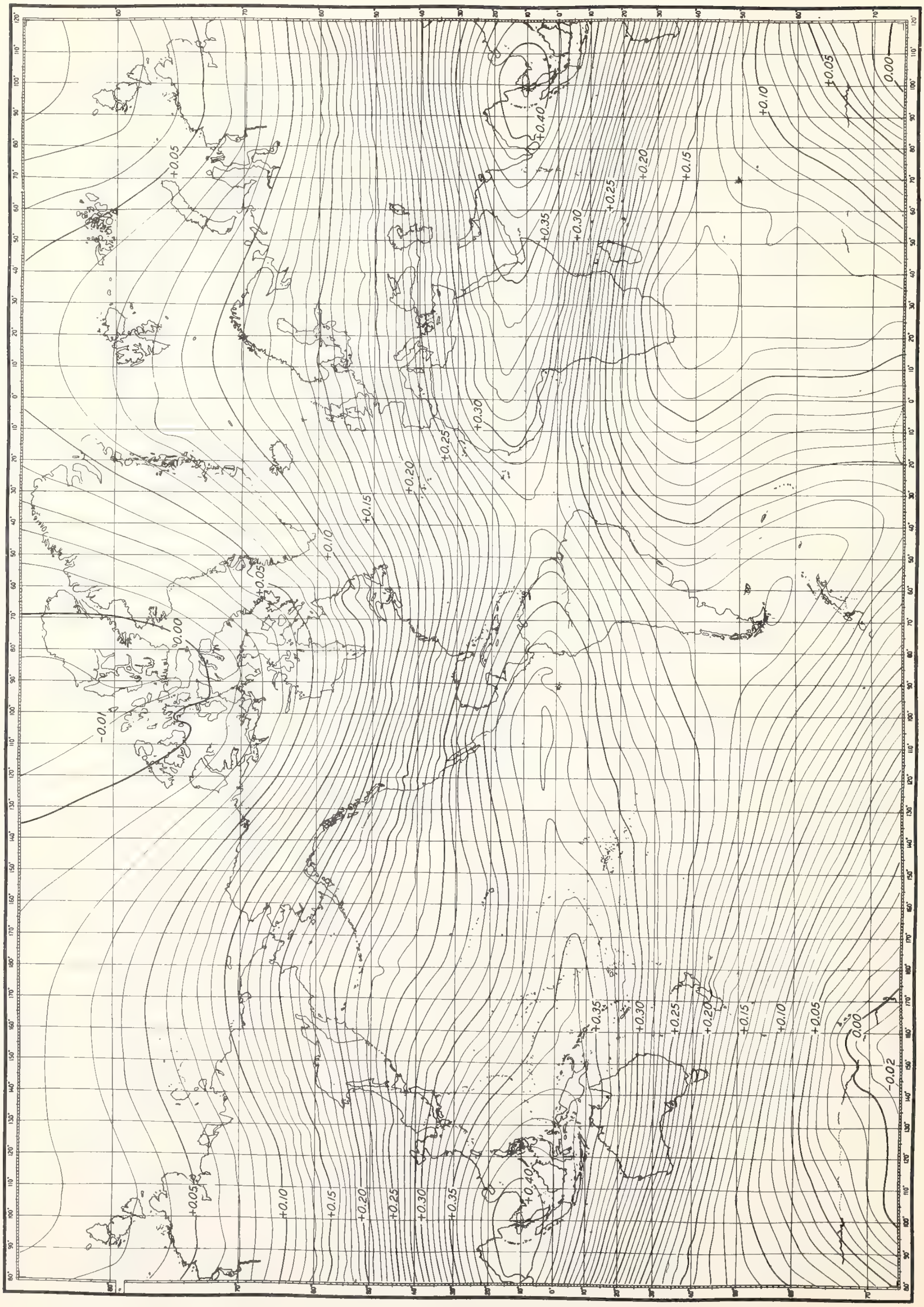

FIG. 148(A)—THE GEOMAGNETIC NORTH COMPONENT IN CGS-UNIT FOR 1945

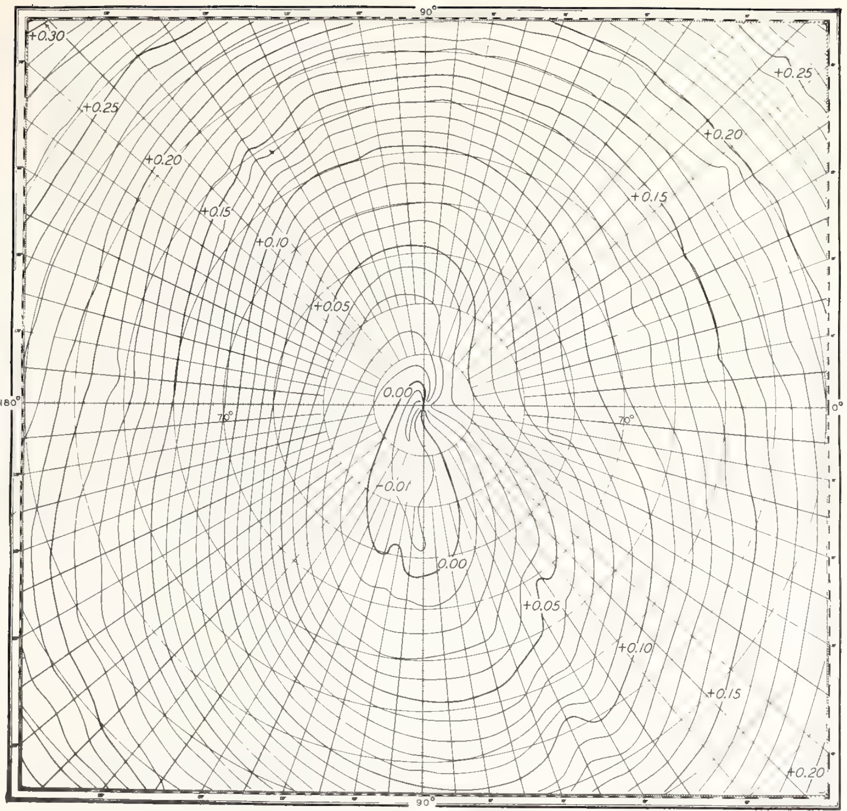

FIG. 148(B)—THE GEOMAGNETIC NORTH COMPONENT IN CGS-UNIT FOR 1945, NORTH POLAR REGION

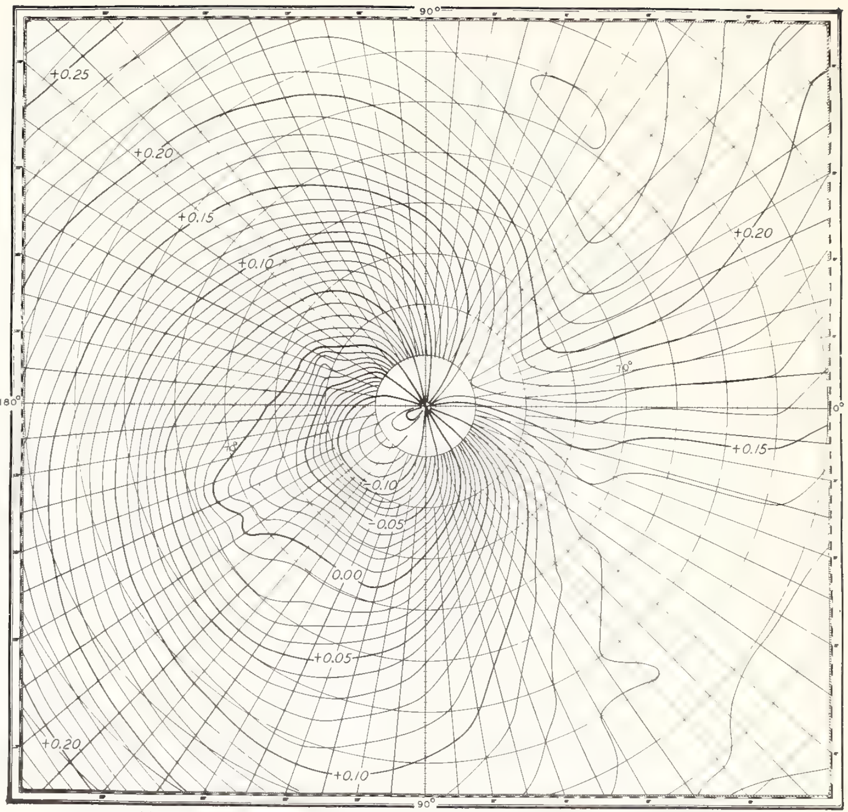

FIG. 148(C)—THE GEOMAGNETIC NORTH COMPONENT IN CGS-UNIT FOR 1945, SOUTH POLAR REGION

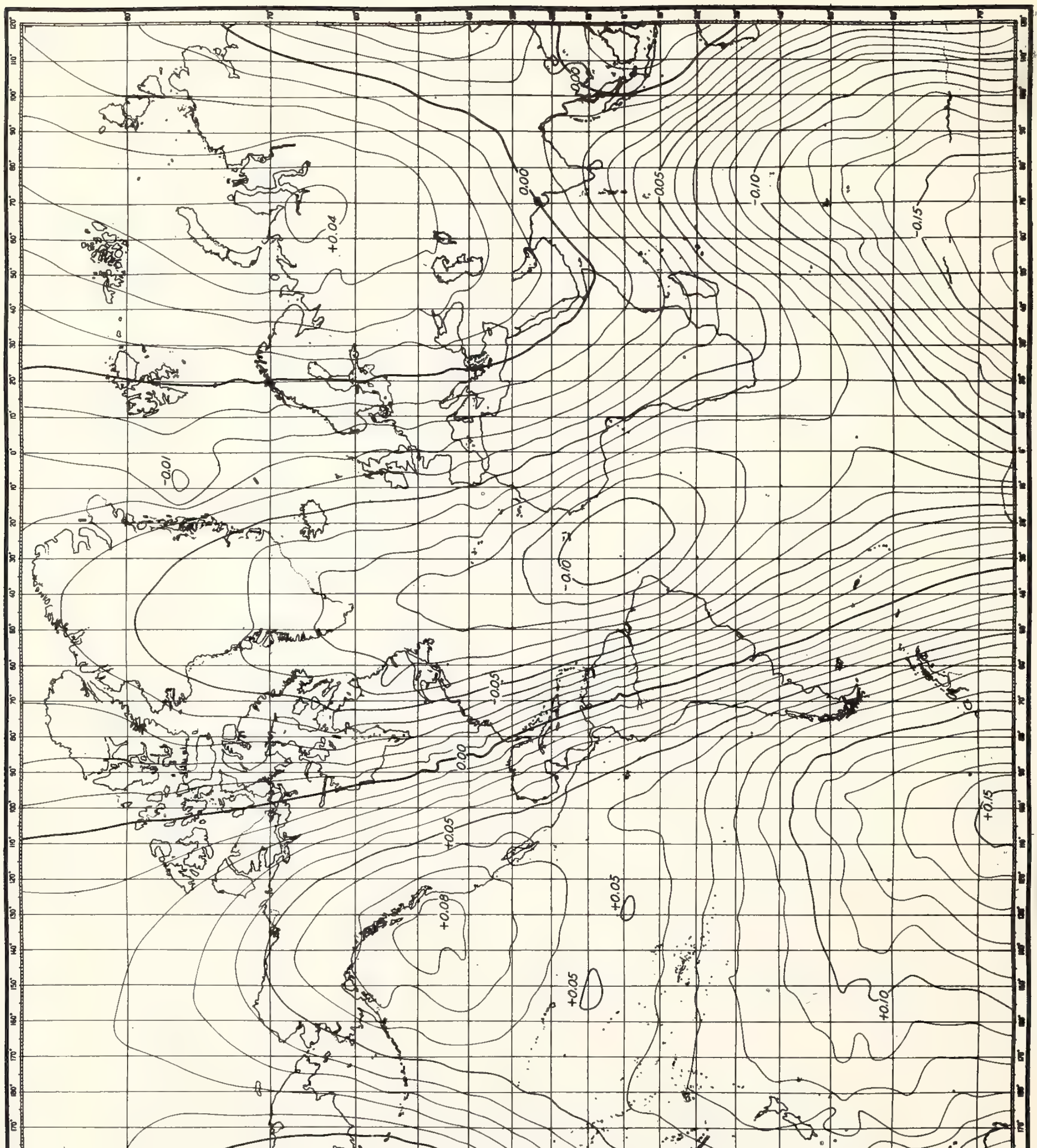

FIG. 149(A)—THE GEOMAGNETIC EAST COMPONENT IN CGS-UNIT FOR 1945

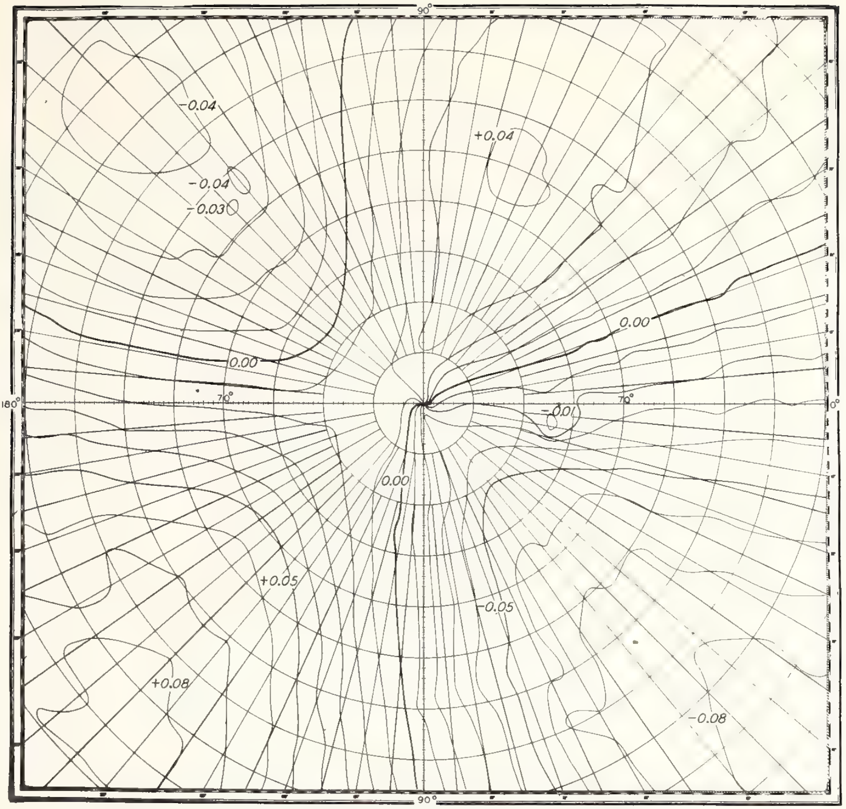

FIG. 149(B)—THE GEOMAGNETIC EAST COMPONENT IN CGS-UNIT FOR 1945, NORTH POLAR REGION

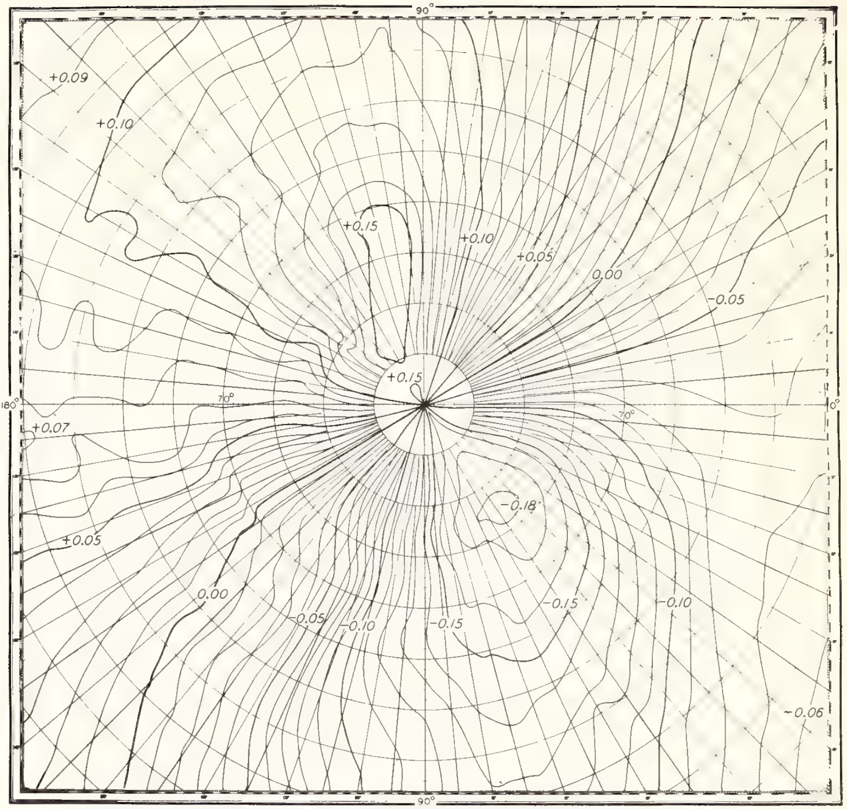

FIG. 149(C)—THE GEOMAGNETIC EAST COMPONENT IN CGS-UNIT FOR 1945, SOUTH POLAR REGION

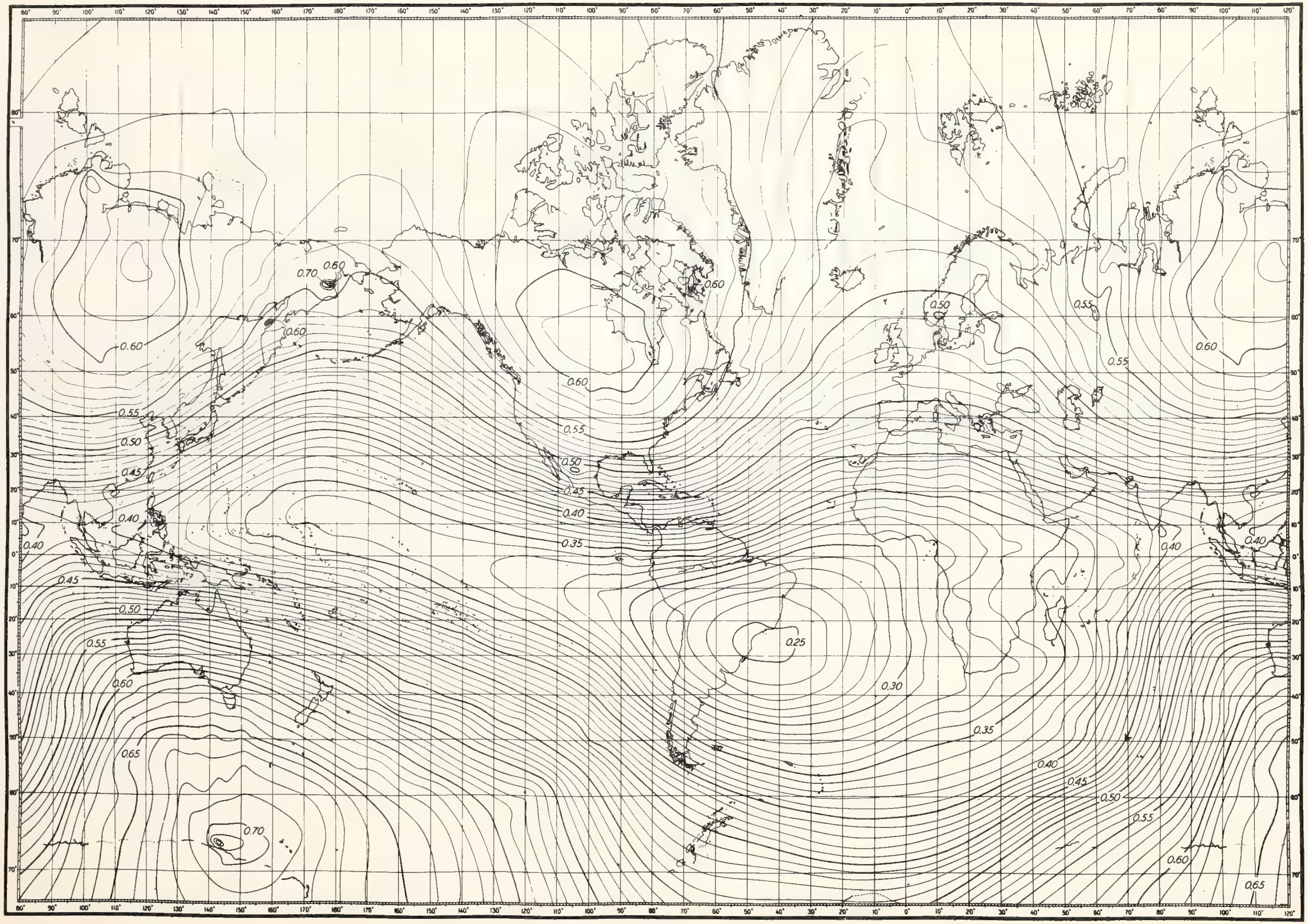

FIG. 150(A)—THE GEOMAGNETIC TOTAL INTENSITY IN CGS-UNIT FOR 1945

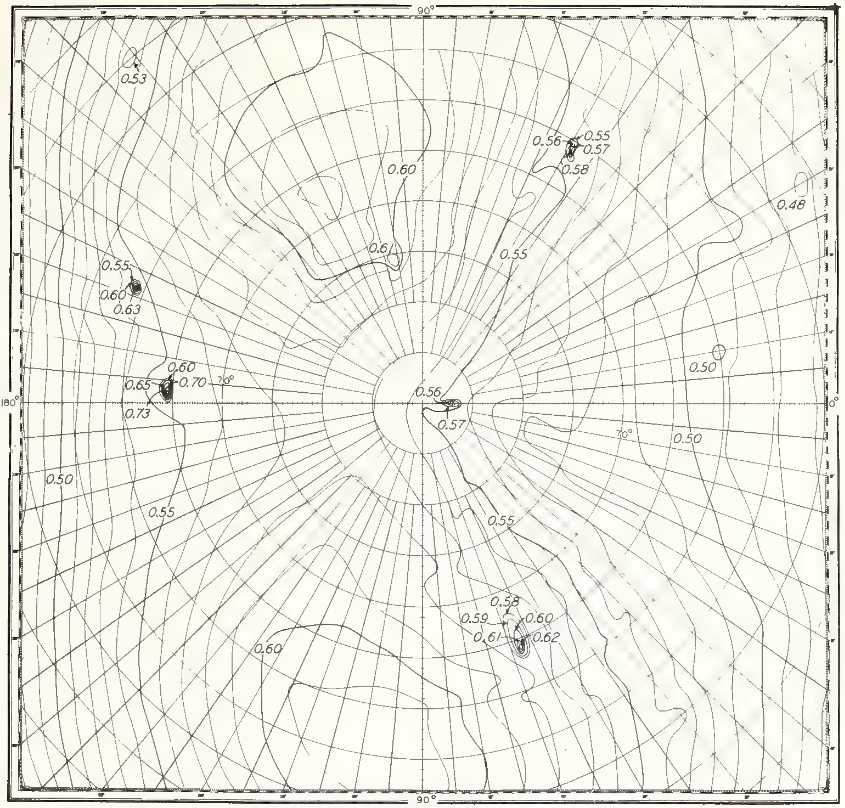

FIG. 150(B)—THE GEOMAGNETIC TOTAL INTENSITY IN CGS-UNIT FOR 1945, NORTH POLAR REGION

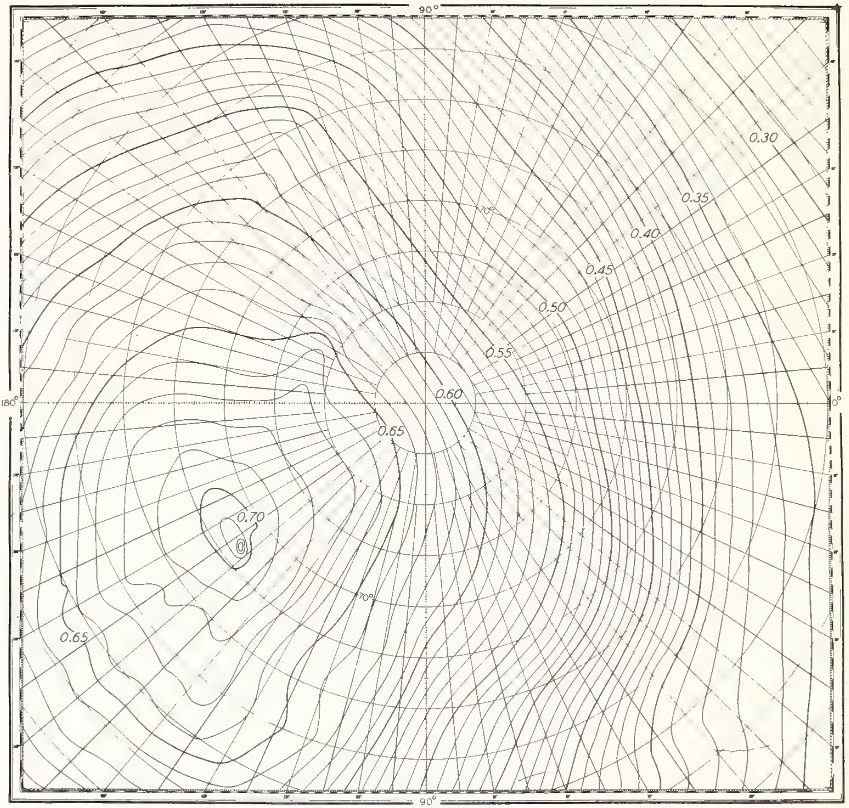

FIG. 150(C)—THE GEOMAGNETIC TOTAL INTENSITY IN CGS-UNIT FOR 1945, SOUTH POLAR REGION

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